GAIN
Gateway for Accelerated Innovation in Nuclear

ADVANCED NUCLEAR DIRECTORY

Developers, Suppliers and National Laboratories

TABLE OF CONTENTS

TABLE OF CONTENTS

TABLE OF CONTENTS

INTRODUCTION

The Advanced Nuclear Directory offers a sample of companies engaged in the development of advanced nuclear technologies and should not be considered a comprehensive list of this industry. All companies featured have participated on a voluntary basis and are responsible for the information provided. Inclusion of a company does not indicate endorsement by any of the directory's sponsors.

ACKNOWLEDGMENT

The Advanced Nuclear Directory was created in partnership between the Gateway for Accelerated Innovation in Nuclear (GAIN) and Third Way, with the help of the United States Nuclear Infrastructure Council (USNIC).

**GAIN reserves the right to edit content for publishing purposes.*

INTRODUCTION

GATEWAY FOR ACCELERATED INNOVATION IN NUCLEAR

GAIN Gateway for Accelerated Innovation in Nuclear

The mission of the GAIN initiative is to provide the nuclear energy industry with access to the technical, regulatory, and financial support necessary to move advanced nuclear technologies toward commercialization, while ensuring the continued reliable and economic operation of the existing nuclear reactor fleet. GAIN offers a single point of access to the broad range of capabilities across the Department of Energy (DOE) national laboratory complex. DOE has invested billions of dollars to build and maintain expertise and infrastructure within the national laboratory system. This vast capability is being leveraged via GAIN to support commercialization of new advanced nuclear technologies.

Location: Idaho Falls, ID
Founded: 2015
Director: Rita Baranwal
Federal Engagement: DOE-NE, NRC, NSUF, NEUP, LWRS, NEAMS, ART
Preferred Point of Contact: Lori Braase / lori.braase@inl.gov

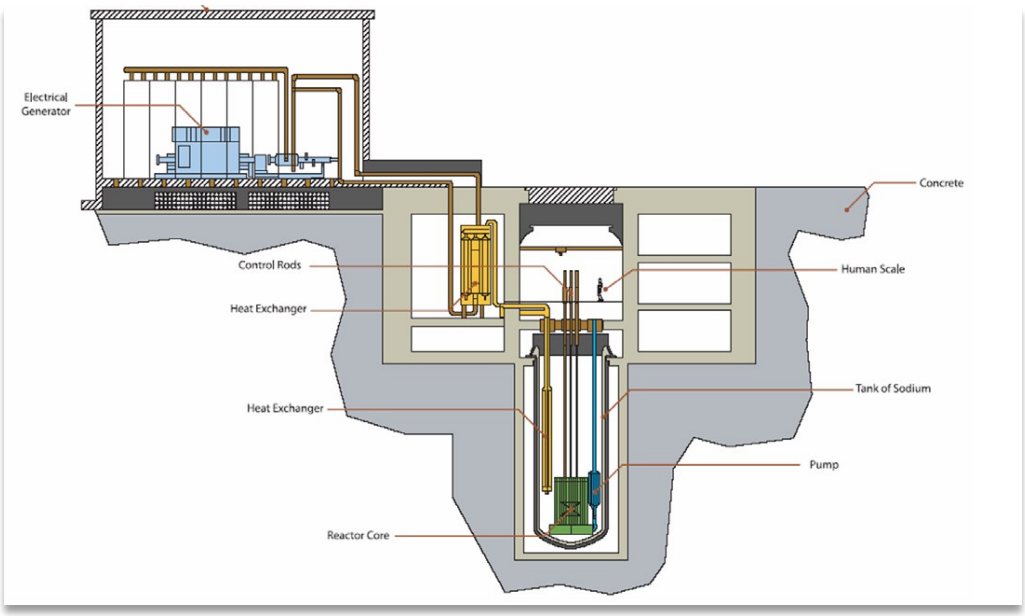
gain.inl.gov

DEVELOPERS

ADVANCED REACTOR CONCEPTS LLC

ARC
ADVANCED REACTOR CONCEPTS, LLC

ARC is seeking to commercialize a disruptive new technology for power generation in the form of an advanced small modular reactor offering 100 MWe. The reactor will be factory-built and offer the customer a twenty-year refueling cycle that provides fixed fuel costs for 20+ years.



www.arcnuclear.com

Location: Chevy Chase, MD
Founded: 2006
Principal/CEO: Donald Wolf
Major Investors: Founders and insiders
Technology Class: Liquid metal cooled
Reactor Type: Sodium fast reactor with metal fuel
Power Output (MWe/MWT): 100 MWe / 260 MWt
Federal Engagement: N/A
Preferred Point of Contact: Robert Braun / rbraun@ARCnuclear.com / 484-354-7840

ADVANCED NUCLEAR | DEVELOPER

BRILLOUIN ENERGY CORP.

Brillouin Energy Corp. is a clean-technology company located in Berkeley California, which is developing ultra-clean, low-cost, energy technology capable of producing industrially useful thermal energy. Brillouin's technology is based on Low Energy Nuclear Reactions (LENR), which it generates on a controlled basis in its reactors through Controlled Electron Capture Reaction (CECR) concept. Third party verified by SRI in 2016, 2017 and 2018. Some of the basic physics of CECR, verified in a TAP with PNNL Feb-2013. Extremely scalable technology designed to drop into shell and tube heat exchangers where the tube is a new type of fire and DTC friendly. No radioactive waste, no penetrating radiation in operation. Four test systems already work with interchangeable parts.

www.brillouinenergy.com

Location: Berkeley, CA
Founded: 2009
Principal/CEO: Robert W. George
Major Investors: 46 Angel Investors
Technology Class: Adaptable gas, liquid, supercritical CO_2 Water / steam 80 -700C
Reactor Type: CECR, low energy nuclear reactions
Power Output (MWe/MWT): 10^{-6} - 3000+ MWe / 10^{-5} - 8000 MWt
Federal Engagement: NA
Preferred Point of Contact: David Firshein / dnf@brillouinenergy.com / 415-419-6429

COLUMBIA BASIN CONSULTING GROUP

ADVANCED NUCLEAR | DEVELOPER

CBCG is a business management and technical consulting firm which provides services relating to advanced reactor engineering and development.

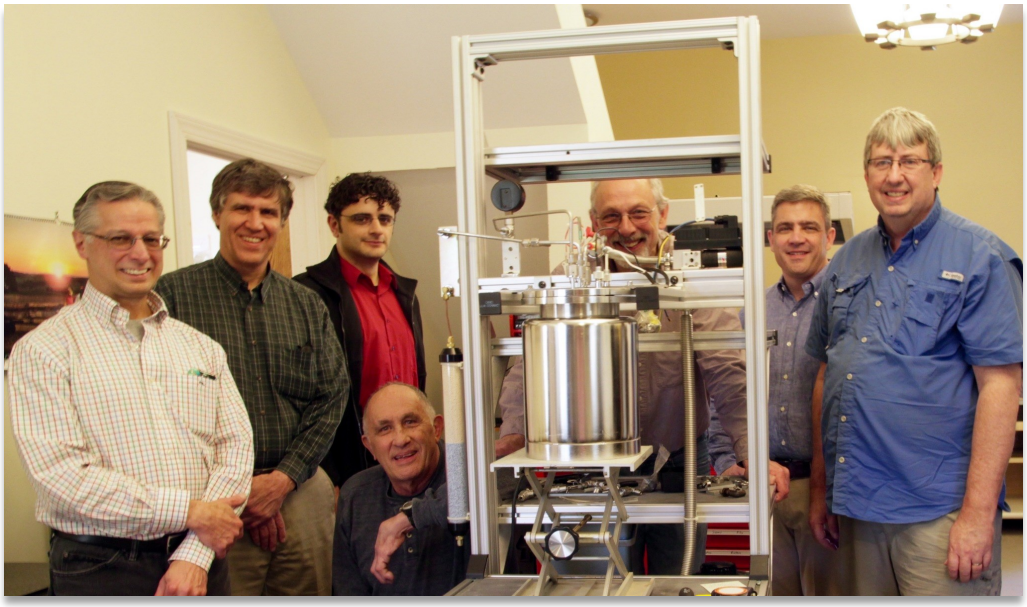
CBCG PbBi Nuclear Plant Development - Power When You *Need* it to BE-THERE

www.cbcgllc.com

Location: Kennewick, WA
Founded: 1998
Principal/CEO: William J. Stokes
Major Investors: Self-funded
Technology Class: Liquid metal cooled
Reactor Type: Lead-bismuth and sodium
Power Output (MWe/MWT): 260 MWe / 600 MWt; 100 MWe / 250 MWt
Federal Engagement: DOE, GAIN, Other
Preferred Point of Contact: William J. Stokes / info@cbcgllc.com

ELYSIUM INDUSTRIES

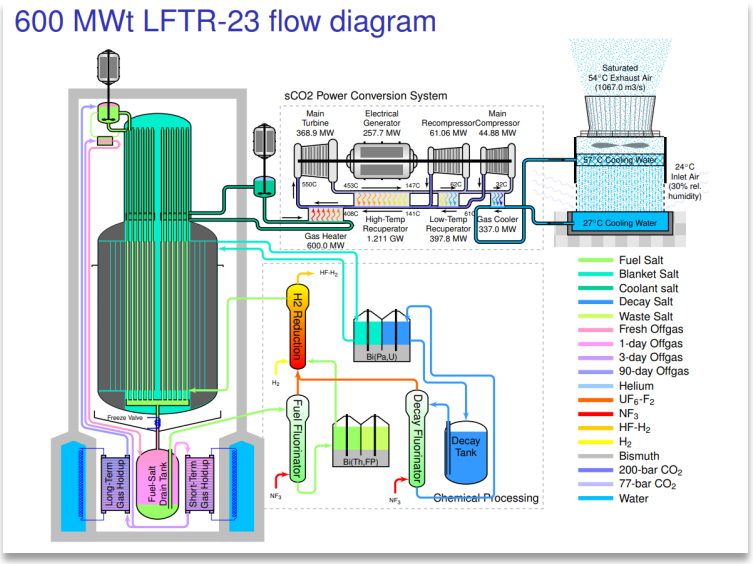
Elysium Industries is developing molten chloride salt fast reactor technology to unlock the abundance of clean, safe, and inexpensive energy for our growing globalized and digitized world.



Location: Schenectady, NY
www.elysiumindustries.com
Founded: 2015
Principal/CEO: Youseff Ballout (President), Ed Pheil (CTO), Carl Perez (CEO)
Major Investors: N/A
Technology Class: Liquid salt fueled/cooled MSRs
Reactor Type: Molten chloride salt fast reactor
Power Output (MWe/MWT): 20-2000 MWe / 125-5000 MWt
Federal Engagement: DOE, GAIN, Other
Preferred Point of Contact: Ed Pheil / e.pheil@elysium-v.com

FLIBE ENERGY, INC.

Flibe Energy was founded in 2011 to design and develop the Liquid-Fluoride Thorium Reactor (LFTR, pronounced "lifter"). LFTR is a modern incarnation of the Molten-Salt Breeder Reactor developed by Oak Ridge National Laboratory in the 1960s and 70s.The LFTR design pursues maximum fuel efficiency, minimum waste streams, gas turbine power conversion, and co-product generation. LFTR technology has steadily progressed since then and was examined in a 2015 study funded by the Electric Power Research Institute. The company also has an office in Richland, Washington.



Location: Huntsville, AL

flibe-energy.com

Founded: 2011

Principal/CEO: Kirk Sorensen

Major Investors: Private

Technology Class: Molten salt reactor

Reactor Type: Liquid fuel/coolant, fluoride salts, thermal spectrum, graphite moderator, thorium/U-233 fuel cycle

Power Output (MWe/MWT): 275 MWe / 600 MWt

Federal Engagement: DOE, NRC

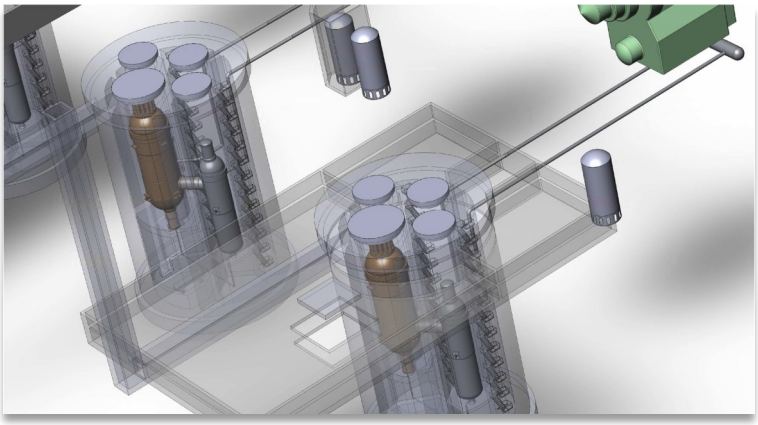
Preferred Point of Contact: Kurt Harris / kurt.harris@flibe-energy.com / 435-535-1414

FRAMATOME, INC.

framatome

Framatome is a major international player in the nuclear energy market recognized for its innovative solutions and value-added technologies for designing, building, maintaining, and advancing the global nuclear fleet. The company designs, manufactures, and installs components, fuel and instrumentation and control systems for nuclear power plants and offers a full range of reactor services.

Framatome is developing the Steam Cycle HTGR Generation IV advanced reactor concept. Its scalable design provides options for a variety of customer needs for high-temperature steam and electricity. Its unparalleled safety profile allows co-location with customer facilities. True walk-away safety and restart capability following a design-basis accident make the SC-HTGR a low investment risk for plant owners and operators.

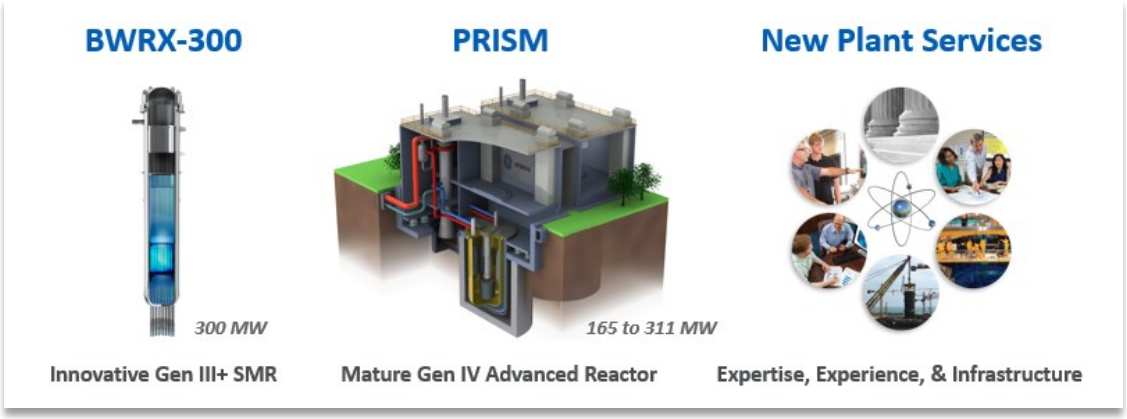


www.framatome.com

Location: Lynchburg, VA
Founded: 1989
Principal/CEO: Gary Mignogna
Major Investors: N/A
Technology Class: High temperature gas cooled
Reactor Type: Steam cycle high temperature gas cooled reactor
Power Output (MWe/MWT): 22-272 MWe / 50-625 MWt
Federal Engagement: DOE, GAIN, ARPA-E, NRC
Preferred Point of Contact: Darryl Gordon / Darryl.gordon@framatome.com / 434-832-5199

GE HITACHI NUCLEAR ENERGY

GE Hitachi Nuclear Energy (GEH) is a global nuclear alliance and world-leading provider of advanced reactor technology, nuclear fuel and services, with more than 60 years of experience developing water and sodium-cooled reactor technology. PRISM is a sodium-cooled, advanced fast reactor that employs inherently-safe metal fuel and air-cooled passive safety, and can be utilized for power generation, process heat, and closing the fuel cycle. PRISM has significant licensing, testing, design, and operation basis (e.g. EBR-II) and provides the highest potential for a successful Generation IV project. BWRX-300 is an innovative water-cooled SMR based on, but simplifying, the NRC-licensed ESBWR. BWRX-300 is projected to cost significantly less per kW than current large and SMR nuclear designs, has competitive lifecycle costs with natural gas combined cycle plants, and is ready for near term deployment. In addition to providing advanced reactors, GEH also offers New Plant Services to support the various new reactor designers by sharing its expertise, experience, and infrastructure.



www.nuclear.gepower.com

Location: Wilmington, NC
Founded: 1955
Principal/CEO: Jay Wileman
Major Investors: N/A
Technology Class: PRISM: GEN IV Advanced Reactor; BWRX-300: GEN III+ SMR
Reactor Type: PRISM: Sodium fast reactor; BWRX-300: Boiling water reactor
Power Output (MWe/MWT): PRISM: 165 & 311 MWe / 471 & 840 MWt; BWRX-300: 300 MWe / 910 MWt
Federal Engagement: DOE, NRC, GNEP, ALMR
Preferred Point of Contact: Patrick Looney / Patrick.Looney@ge.com; Eric Loewen / Eric.Loewen@ge.com; GEH.NPP@ge.com

GENERAL ATOMICS

ADVANCED NUCLEAR | DEVELOPER

General Atomics has been at the forefront of innovation in nuclear energy since the 1950s. We continue to push the boundaries of what is possible in advanced nuclear reactors while helping to sustain our current reactor fleet and spinning off advanced material technologies that have the potential to enhance public safety and well-being. GA's TRIGA® research reactors are some of the most successful reactor designs in history.

GA is building on its experience with TRIGA® in developing the next generation of advanced fission reactors, such as the innovative Energy Multiplier Module (EM2), an advanced high temperature helium-cooled fast reactor, producing 265 MWe of power per module at a net efficiency of 53%. EM2 employs cutting-edge advances in materials science to address the four core challenges facing nuclear energy – safety, waste, cost, and non-proliferation. It can be powered by spent nuclear fuel, operated up to 30 years without refueling, and first demonstrated at small scale (50MWe).

GA is developing silicon carbide (SiC) composites for Accident Tolerant Fuel cladding and EM2 reactor components. Innovation technology solutions are underway for specialty nuclear fuels, radioactive waste remediation, production of medical isotopes, and advanced materials for extreme environment applications.

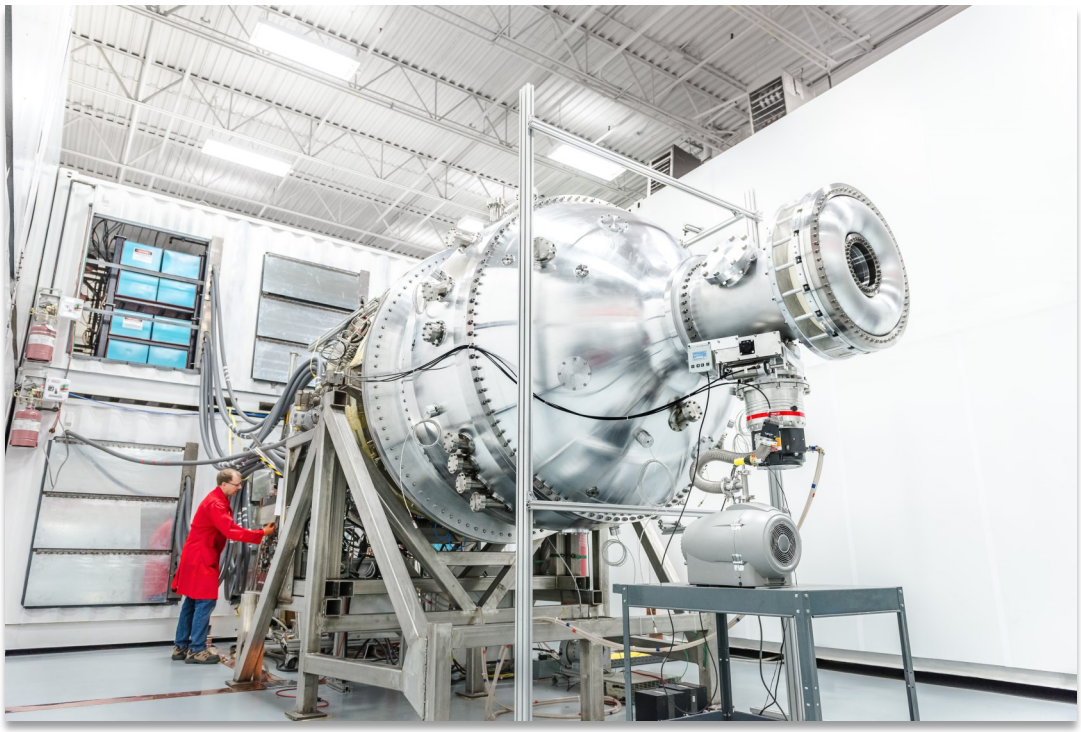
www.ga.com

Location: San Diego, CA
Founded: 1955
Principal/CEO: Neal Blue
Major Investors: N/A
Technology Class: Advanced nuclear technologies and materials
Reactor Type: High temperature gas cooled fast reactor
Power Output (MWe/MWT): 265 MWe / 500 MWt
Federal Engagement: DOE, GAIN, ARPA-E, NRC
Preferred Point of Contact: Ron Faibish / ron.faibish@ga.com / 202-713-8333

GENERAL FUSION

generalfusion®

General Fusion is the world's most advanced private fusion technology venture, pursuing a faster and more practical path to commercially viable fusion energy.



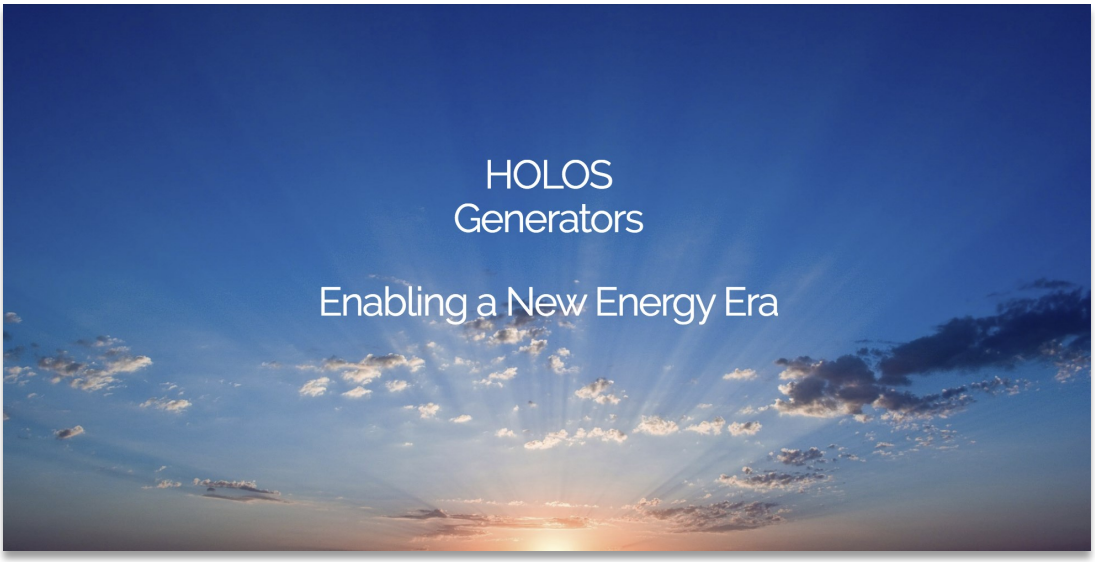
generalfusion.com

Location: Burnaby, Canada
Founded: 2002
Principal/CEO: Christofer Mowry
Major Investors: Government of Canada Strategic Innovation Fund, Bezos Expeditions, Khazanah Nasional, Chrysalix Energy VC, Braemar Energy Ventures, SET Ventures, Cenovus Energy, BDC Canada, GrowthWorks, Entrepreneurs Fund, Sustainable Development Technology Canada
Technology Class: Fusion
Reactor Type: Magnetized target fusion
Power Output (MWe/MWT): 200 MWe
Federal Engagement: Other
Preferred Point of Contact: Tim Howard / tim.howard@generalfusion.com

HOLOSGEN LLC

HolosGen™

HolosGen develops mobile scalable integral nuclear generators with simplified and innovative designs that are optimized to produce economical, distributable, pollutant-free and, most importantly, safe electricity.

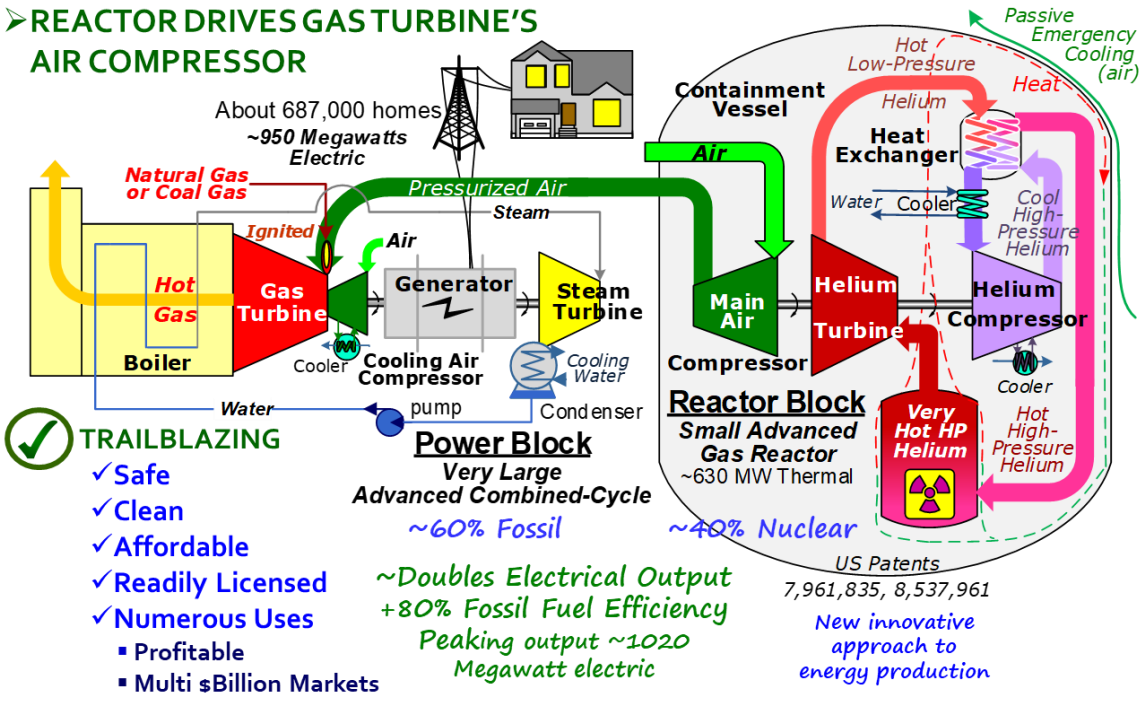


Location: Manassas Park, VA
Founded: 2017
Principal/CEO: Claudio Filippone
Major Investors: N/A
Technology Class: Gas cooled
Reactor Type: High temperature gas reactor
Power Output (MWe/MWT): 3-81 MWe / 5-135 MWt
Federal Engagement: N/A
Preferred Point of Contact: Claudio Filippone

www.holosgen.com

HYBRID POWER TECHNOLOGIES LLC

Hybrid Power Technologies LLC



US SMALL BUSINESS INNOVATION

Location: Overland Park, KS

www.www.hybridpwr.com

Founded: 2011

Principal/CEO: Michael F. Keller

Major Investors: Privately funded

Technology Class: Gas cooled

Reactor Type: Graphite moderated, helium cooled

Power Output (MWe/MWT): 950 MWe / 630 MWt

Federal Engagement: N/A

Preferred Point of Contact: Michael F. Keller / m.keller@hybridpwr.com / 913-681-7687

KAIROS POWER LLC

Kairos Power

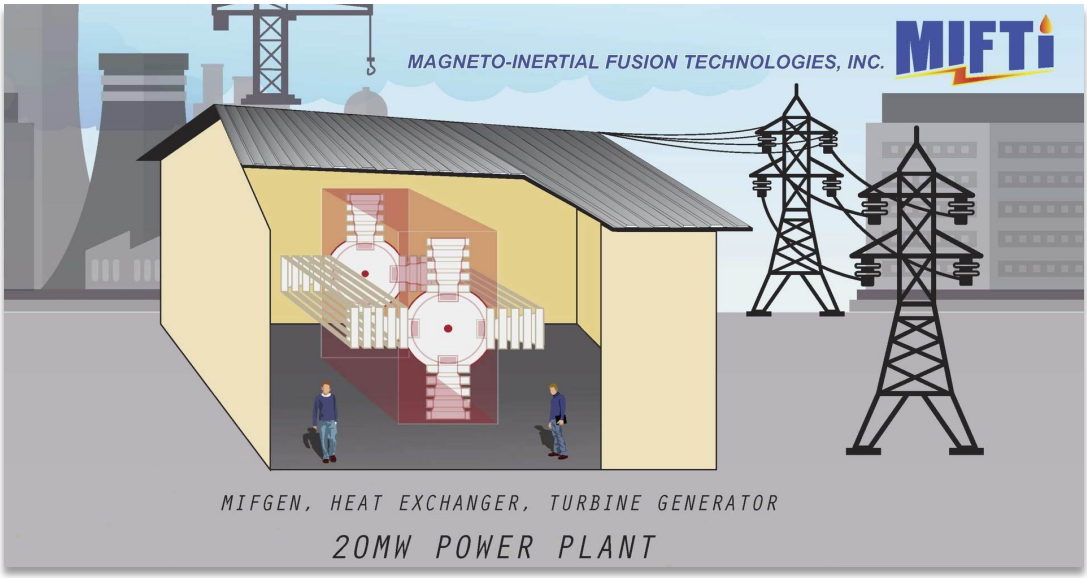
Our mission: enable the world's transition to clean energy, with the ultimate goal of dramatically improving people's quality of life while protecting the environment. Kairos Power will commercialize the fluoride salt-cooled high-temperature reactor (FHR), which can be deployed with robust safety, cost competitiveness through high efficiency and low-pressure small modular design, and flexible operation to accommodate the expansion of variable renewables.

www.kairospower.com

Location: San Francisco, CA
Founded: 2016
Principal/CEO: Michael Laufer
Major Investors: N/A
Technology Class: Solid-fueled/Molten salt cooled
Reactor Type: Graphite-moderated, fluoride salt-cooled, high temperature reactor
Power Output (MWe/MWT): N/A
Federal Engagement: GAIN
Preferred Point of Contact: Jaclyn Rodriguez / rodriguez@kairospower.com

MAGNETO-INERTIAL FUSION TECHNOLOGIES, INC

MIFTI specializes in fusion energy and medical isotope technology.



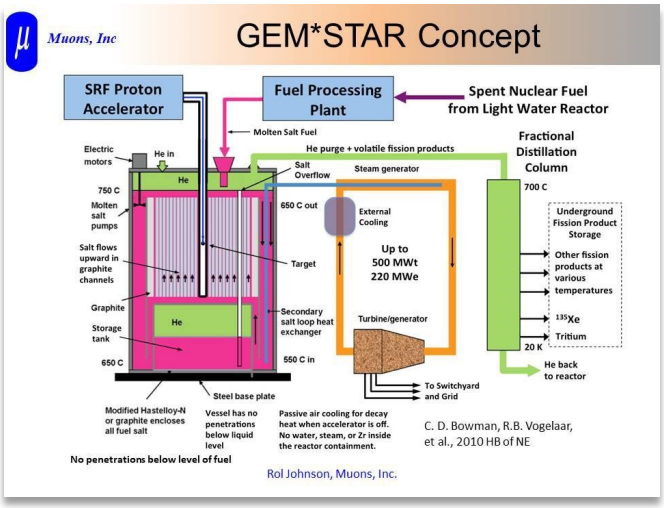
Location: Tustin, CA
Founded: 2009
Principal/CEO: Gerald Simmons (CEO)
Major Investors: DOE, ARPA-E, Strong Atomics Fund 1
Technology Class: Thermonuclear fusion
Reactor Type: Nuclear fusion reactor
Power Output (MWe/MWT): 20 MWe
Federal Engagement: DOE, ARPA-E
Preferred Point of Contact: Jerry Simmons

www.mifti.com

MUONS, INC.

Muons, Inc.
Innovation in Research

*Partnering with national labs and universities with their extraordinary people and facilities, Muons has leveraged its creative talents to provide solutions to many problems of global and national interest. Muons has received over $30M in competitive DOE contracts and Small Business Innovation and Technology Transfer Research grants, which have generated intellectual property as well as appreciation for our work in the accelerator and reactor communities. Examples of our inventions are included in discovery science (Muon Collider, the next atom smasher); medicine (Energy-Recovery Linacs for commercial production of new radioisotopes for therapy and diagnostics); national security (photon and neutron sources for cargo scanning); energy and environment (GEM*STAR subcritical system for carbon-free energy production); and industry (magnetron power sources for RF cavities). As a supporter of science and technology, Muons supports students and post-docs and provides computer programs for accelerator and reactor communities.*



Location: Batavia, IL
www.muonsinc.com
Founded: 2002
Principal/CEO: Rolland Johnson (President)
Major Investors: Rolland Johnson
Technology Class: Advanced reactor developer
Reactor Type: SRF linac driven subcritical molten salt thermal spectrum SMR
Power Output (MWe/MWT): 220 MWe/500 MWt
Federal Engagement: DOE, ARPA-E, GAIN, DOE SBIR-STTR Programs
Preferred Point of Contact: Rolland Johnson / rol@muonsinc.com / 757-870-6943

NIOWAVE, INC.

Niowave is utilizing transformative science and technology for advancing nuclear power to meet the nation's energy and security needs. Niowave's Radioisotope Program established both the facilities and the NRC license to operate a subcritical assembly and perform nuclear fuel reprocessing. The team is developing a hybrid fast/thermal spectrum subcritical testbed, coupled to a superconducting electron linac, to provide peak fast-spectrum neutron fluxes greater than 1E15 n/cm2s in heavy liquid-metal environment. The facility will be used to test novel fuels, materials, instruments and components, reactor safety designs, provide data for reactor code development, and support the regulatory process for licensing novel technology.

www.niowaveinc.com

Location: Lansing, MI
Founded: 2005
Principal/CEO: Terry L. Grimm (President)
Major Investors: Privately funded
Technology Class: Liquid metal cooled (lead-bismuth eutectic)
Reactor Type: Hybrid fast/thermal spectrum subcritical testbed
Power Output (MWe/MWT): 0.1-10 MWt
Federal Engagement: DOE, NRC, DOD, NIH
Preferred Point of Contact: Faisal Y. Odeh / odeh@niowaveinc.com

NUGEN, LLC

NuGen is developing a compact, fully integrated gas-cooled high-temperature nuclear-fueled engine on which a patent is pending. Its hallmarks would be simplicity and versatility. The engine could be deployed for a number of terrestrial and extraterrestrial uses, including remote locations, other off-grid uses and cogeneration.

Location: Charlotte, NC
www.nucdev.com
Founded: 2006
Principal/CEO: Steve Rhyne
Major Investors: Founder
Technology Class: Advanced HTGR
Reactor Type: Fast thermal
Power Output (MWe/MWT): 3-50 MWe
Federal Engagement: FOA application to DOE submitted 10/31/2018
Preferred Point of Contact: Steve Rhyne / steve@nucdev.com / 704-307-7280

NUSCALE POWER

NuScale is developing SMR that integrate the reactor, steam generator, pressurizer, and containment into a single module. Nuclear power plants using NuScale technology can be designed to accommodate growing electrical demand by simply adding additional modules as the need arises.

www.nuscalepower.com

Location: Tigard, OR
Founded: 2007
Principal/CEO: John Hopkins
Major Investors: Fluor Corporation
Technology Class: Water cooled
Reactor Type: Integral pressurized water reactor
Power Output (MWe/MWT): 50 MWe
Federal Engagement: DOE, NRC
Preferred Point of Contact: Lenka Kollar / lkollar@nuscalepower.com

SILICON ACCELERATOR, INC.

ADVANCED NUCLEAR | DEVELOPER

SAI designs small computer chip-driven accelerator-based fission/ fusion power systems.

Location: San Francisco, CA
Founded: 2006
Principal/CEO: Ed Pheil
Major Investors: N/A
Technology Class: Accelerated driven direct ion to electricity conversion
Reactor Type: Heavy ion inertial confinement fission/fusion
Power Output (MWe/MWT): mW to 1 MWe per module
Federal Engagement: Other
Preferred Point of Contact: Ed Pheil / e.pheil@elysium-v.com

TERRAPOWER, LLC

TerraPower is a nuclear innovation company that originated with Bill Gates and a group of like-minded visionaries who evaluated the fundamental challenges to raising living standards around the world. TerraPower's mission is to be a world leader in new nuclear technologies, while developing innovators and future leaders in the nuclear field.

terrapower.com

Location: Bellevue, WA
Founded: 2008
Principal/CEO: Bill Gates (Chairman), Lee McIntire (CEO), Chris Levesque (President)
Major Investors: N/A
Technology Class: Liquid metal and salt cooled
Reactor Type: Traveling wave reactor—sodium cooled fast reactor; Molten chloride fast reactor—molten salt/liquid fuel fast reactor
Power Output (MWe/MWT): Various (up to 1200 MWe) for both concepts
Federal Engagement: DOE, NRC
Preferred Point of Contact: inquiries@terrapower.com

TERRESTRIAL ENERGY USA, INC.

Terrestrial Energy USA (TEUSA) is developing an advanced Small Modular Reactor (aSMR) using Integral Molten Salt Reactor (IMSR®) technology, for first commercial deployment in the 2020's, and to provide cost-competitive electricity and process heat to industry. The IMSR® design is a graphite moderated, LEU once-through fueled, fluoride molten salt reactor (MSR) that uses a replaceable reactor core architecture.

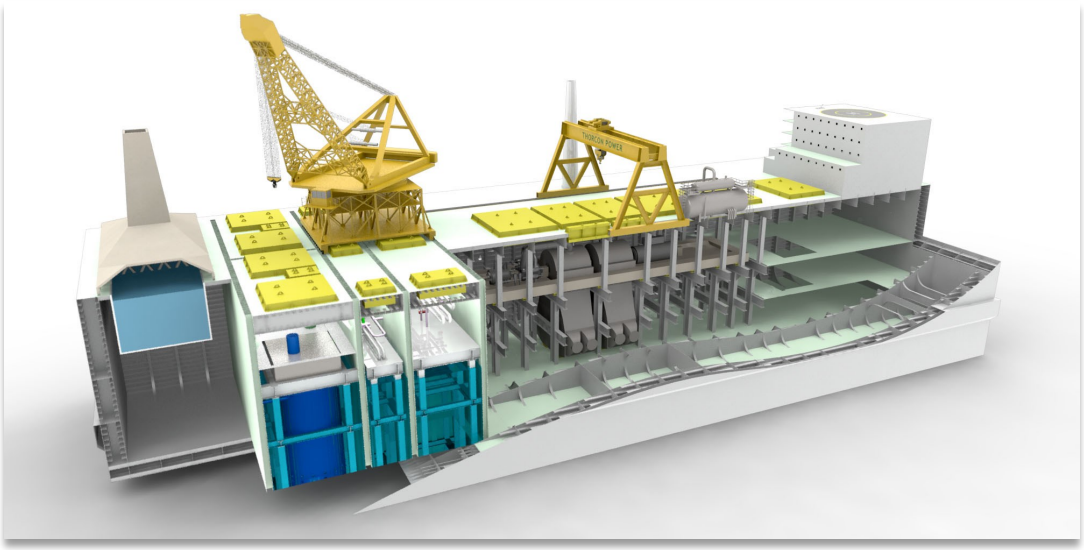
www.terrestrialusa.com

Location: New York, NY
Founded: 2014
Principal/CEO: Simon Irish
Major Investors: Private investors
Technology Class: Advanced small modular reactor
Reactor Type: Molten salt reactor
Power Output (MWe/MWT): 192 MWe / 400 MWt
Federal Engagement: DOE, GAIN, ARPA-E, NRC
Preferred Point of Contact: Robin Rickman / rrickman@terrestrialusa.com / 724-421-6434

THORCON INTERNATIONAL

THORCON
POWERING UP OUR WORLD

ThorCon is developing a hybrid thorium/uranium liquid fission power plant that generates clean, full-time electric power at a cost cheaper than coal.



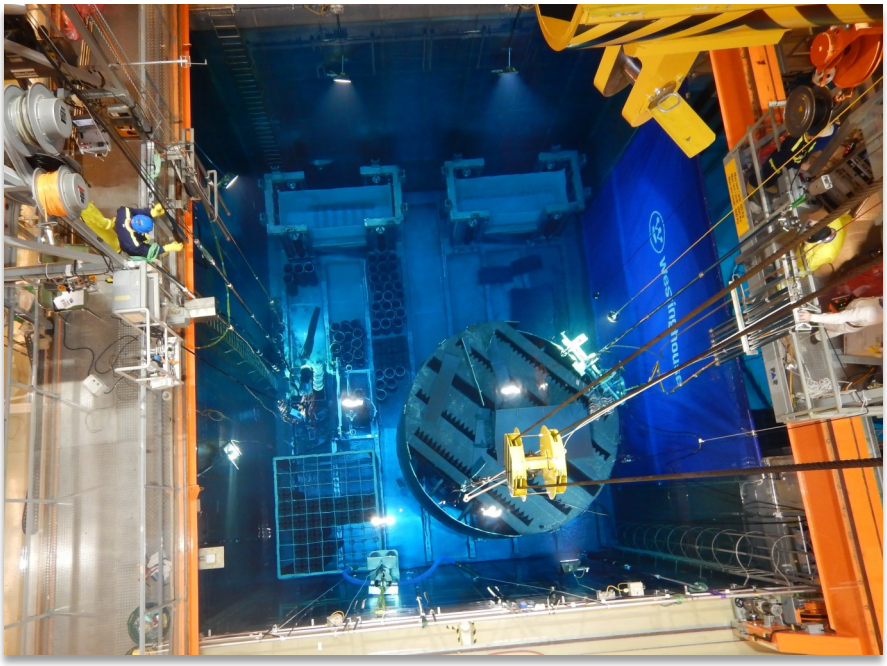
Location: Stevenson, WA; Singapore
Founded: 2016
Principal/CEO: Lars Jorgensen (CEO)
Major Investors: N/A
Technology Class: Salt cooled
Reactor Type: Thermal molten salt reactor
Power Output (MWe/MWT): 250 MWe / 557 MWt
Federal Engagement: N/A
Preferred Point of Contact: info@thorconpower.com

thorconpower.com

WESTINGHOUSE ELECTRIC COMPANY LLC

ADVANCED NUCLEAR | DEVELOPER

Westinghouse Electric Company is the world's pioneering nuclear energy company and is a leading supplier of nuclear plant products and technologies to utilities throughout the world. Westinghouse supplied the world's first commercial pressurized water reactor in 1957 in Shippingport, PA, United States. Today, Westinghouse technology is the basis for approximately one-half of the world's operating nuclear plants. For more information, please visit www.westinghousenuclear.com.

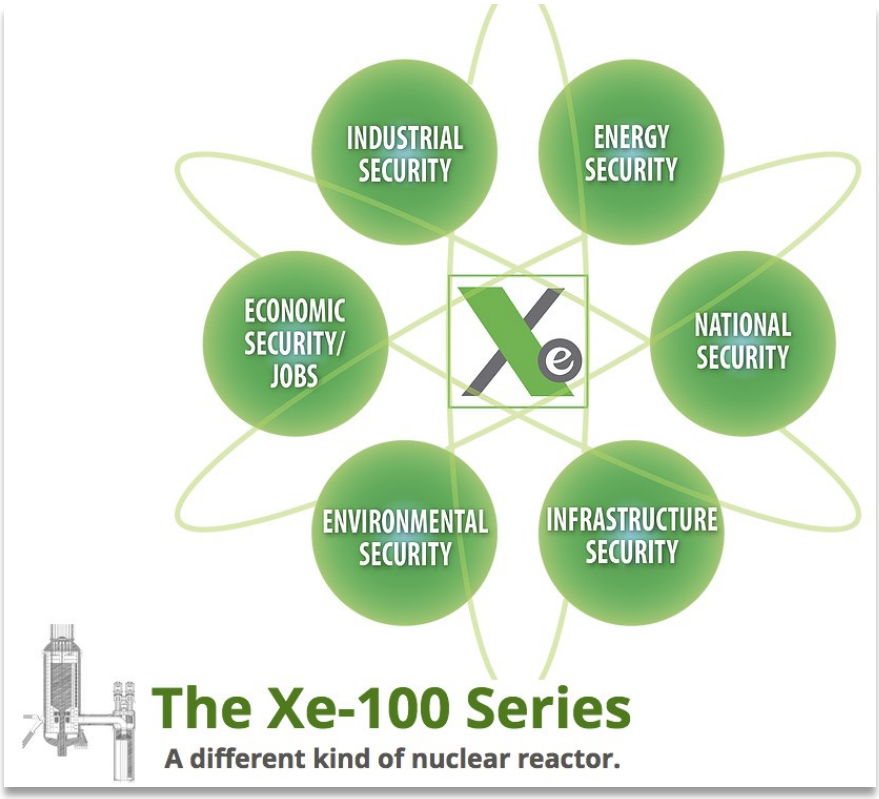


www.westinghousenuclear.com

Location: Cranberry Township, PA
Founded: 1886
Principal/CEO: Jose Emeterio Gutierrez (President and CEO)
Major Investors: Brookfield Business Partners L.P
Technology Class: Advanced modular reactor
Reactor Type: Lead cooled fast reactor; heat pipe cooled reactor
Power Output (MWe/MWT): Lead cooled fast reactor- 400-500 MWe / 950 MWt; Heat pipe cooled reactor- 0.5-50 MWe / 2-100 MWt
Federal Engagement: DOE, ARPA-E, GAIN, NRC
Preferred Point of Contact: Layla Sandell / sandell@westinghouse.com

X-ENERGY, LLC

X-energy is a nuclear reactor and fuel design engineering services company developing Generation IV, high-temperature gas-cooled nuclear reactor designs that are smaller, simpler and meltdown-proof when compared to conventional nuclear designs.



www.x-energy.com

Location: Greenbelt, MD
Founded: 2009
Principal/CEO: Sam Ghaffarian
Major Investors: N/A
Technology Class: Gas cooled
Reactor Type: High temperature gas cooled pebble bed reactor
Power Output (MWe/MWT): 76 MWe / 200 MWt
Federal Engagement: DOE, GAIN, ARPA-E, NRC
Preferred Point of Contact: Jeff Harper / jharper@x-energy.com

ADVANCED NUCLEAR | DEVELOPER

YELLOWSTONE ENERGY

Yellowstone Energy focuses on advanced nuclear reactor design.

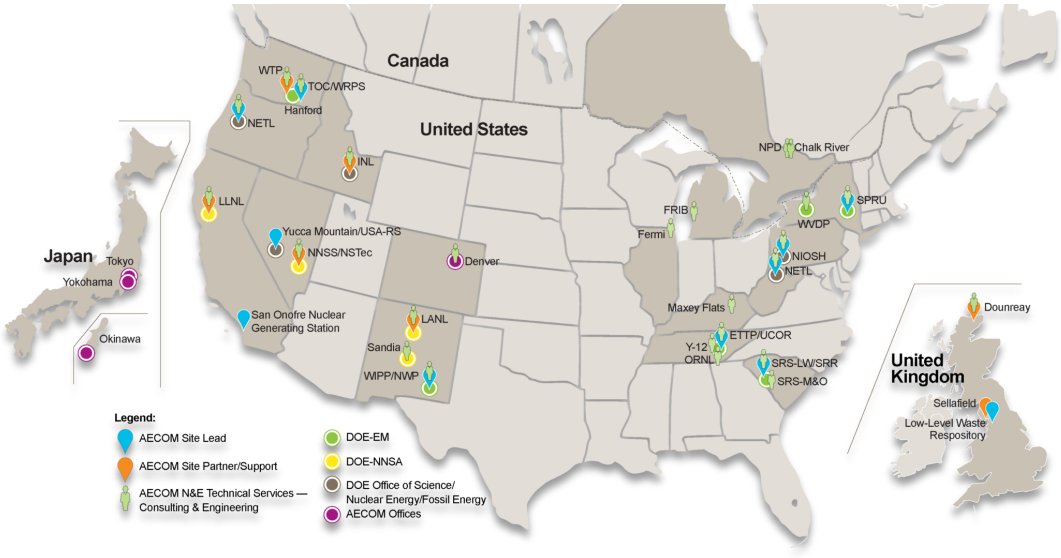
www.yellowstone.energy

Location: Knoxville, TN
Founded: 2016
Principal/CEO: Matt Ellis
Major Investors: N/A
Technology Class: Salt cooled
Reactor Type: Molten salt reactor
Power Output (MWe/MWT): 200 MWe / 500 MWt
Federal Engagement: DOE
Preferred Point of Contact: Matt Ellis / /matt@yellowstone.energy / 208-344-3570

SUPPLIERS

AECOM

AECOM is a global network of experts working with clients, communities and colleagues to develop and implement innovative solutions to the world's most complex challenges, from delivering clean water and energy to helping governments maintain stability and security. AECOM connects expertise across services, markets, and geographies to deliver transformative outcomes.



www.aecom.com

Location: Aiken, SC
Founded: 1990
Principal/CEO: Mike Burke
Major Customers: N/A
Federal Engagement: DOE, Other
Preferred Point of Contact: Eric Knox / eric.knox@aecom.com

ANALYSIS AND MEASUREMENT SERVICES CORPORATION

INNOVATING NUCLEAR TECHNOLOGY
ANALYSIS AND MEASUREMENT SERVICES CORPORATION

AMS provides the worldwide nuclear industry with products and services to measure I&C performance and verify compliance with technical specifications and regulatory requirements.

Location: Knoxville, TN
Founded: 1977
Principal/CEO: H.M. Hashemian
Major Customers: N/A
Federal Engagement: DOE, GAIN, Other
Preferred Point of Contact: H.M. Hashemian / info@ams-corp.com

www.ams-corp.com

BECHTEL NUCLEAR, SECURITY & ENVIRONMENTAL

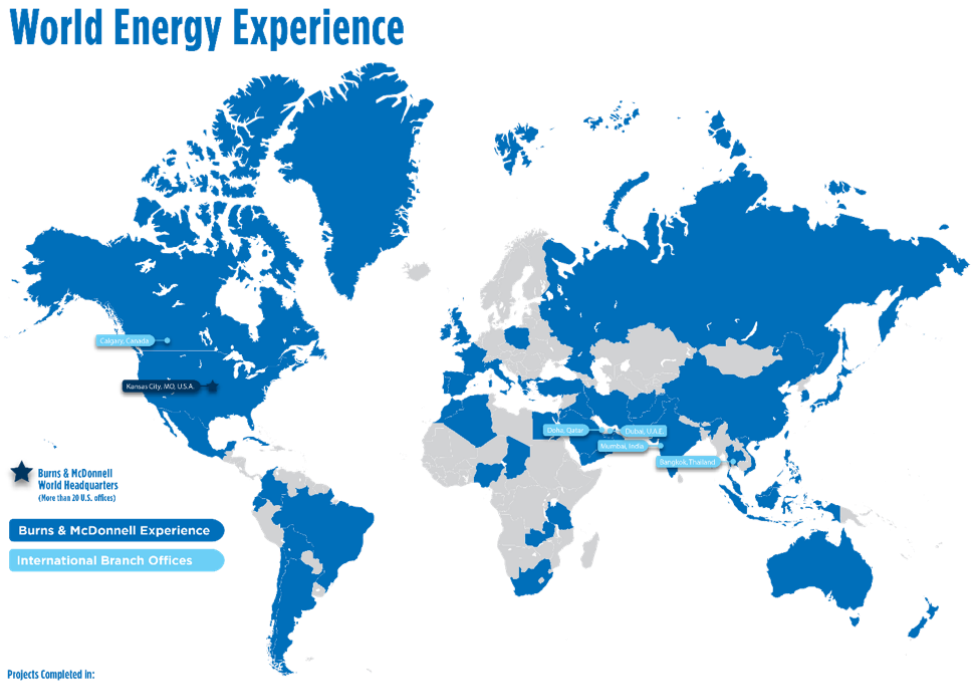
Bechtel's Nuclear, Security & Environmental global business unit leverages Bechtel's six decades in the nuclear industry to execute both commercial and government projects across the nuclear lifecycle. Bechtel's commercial nuclear power division is a global leader in the licensing, design, procurement, and construction of nuclear power plants, whether it is new build, plant completion or recovery, modifications to existing facilities, or advanced reactor technology development.

Location: Reston, VA
Founded: 1898
Principal/CEO: Barbara Rusinko
Major Customers: N/A
Federal Engagement: DOE, NRC, ARPA-E, DOD
Preferred Point of Contact: Muhammad Fahmy / mgfahmy@bechtel.com / 703-429-6859

www.bechtel.com

BURNS & MCDONNELL

Burns & McDonnell is a worldwide leader in engineering and construction with over 7,000 employee-owners in over 40 offices across the U.S. and throughout the world. At Burns & McDonnell, our engineers, architects, scientists and construction professionals do more than plan, design and implement. With a mission that remains unchanged since our founding in 1898 - Make Our Clients Successful - our team partners with you on the toughest challenges, constantly working to make the world an amazing place.



Location: Kansas City, MO; Other worldwide offices
www.burnsmcd.com
Founded: 1898
Principal/CEO: Ray Kowalik
Major Customers: X-energy, Bruce Power, Ameren-Callaway, Evergy-Wolf Creek, APS-Palo Verde, Ontario Power Generation
Federal Engagement: DOD, NRC, Other
Preferred Point of Contact: Glenn Neises / gneises@burnsmcd.com

BWX TECHNOLOGIES, INC.

BWXT has been involved in the nuclear industry since its beginning. As a federal contractor, BWXT provides nuclear components and fuel for the U.S. Navy's submarine and aircraft carrier fleet. Commercially, BWXT manufactures heavy components for CANDU reactors, provides services for the U.S. and Canadian nuclear markets, and provides engineering and design capabilities for advanced reactor technologies and fuel.

Location: Lynchburg, VA
Founded: 2017
Principal/CEO: Rex Geveden
Major Customers: N/A
Federal Engagement: DOE, NRC, Other
Preferred Point of Contact: Joe Miller / jkmiller@bwxt.com

www.bwtx.com

CENTRUS TECHNICAL SOLUTIONS

Centrus Technical Solutions provides a one-stop shop for meeting the advanced nuclear industry's manufacturing and fuel design needs. Based on our experience with nuclear fuel, multi-physics modeling, engineering, design, advanced manufacturing, and project management, we can assist with the design and manufacture of critical components as well as the business planning, design, and licensing of facilities to produce new fuels. From design and engineering to NQA-1 compliant manufacturing, Centrus Technical Solutions is your trusted, full-service partner.

www.centrusenergy.com

Location: Oak Ridge, TN
Founded: 1998
Principal/CEO: Larry Cutlip (Vice President Field Operations)
Major Customers: N/A
Federal Engagement: DOE, GAIN, NRC, Oak Ridge National Laboratory
Preferred Point of Contact: Mark McClure / mccluremL@centrusenergy.com / 865-241-7095

CERAMIC TUBULAR PRODUCTS

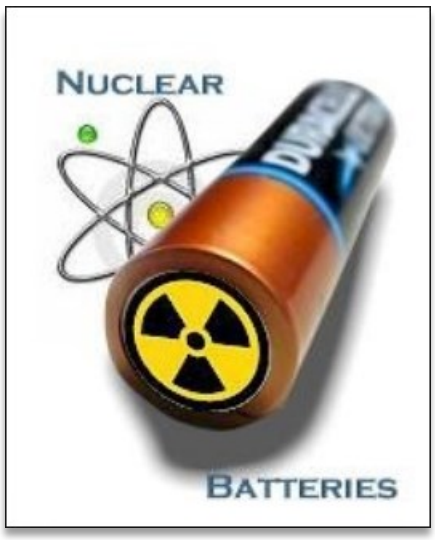
Ceramic Tubular Products develops and supplies very high temperature ceramic tubes and materials for existing and future nuclear and solar thermal applications.

Location: Lynchburg, VA
Founded: 2006
Principal/CEO: Jeffrey Halfinger
Major Customers: N/A
Federal Engagement: DOE, GAIN
Preferred Point of Contact: Jeffrey Halfinger / 424-239-1979

www.ctp-usa.com

COMPETITIVE ACCESS SYSTEMS, INC.

Competitive Access Systems (CAS), Inc. develops self-recharging nuclear battery technologies.



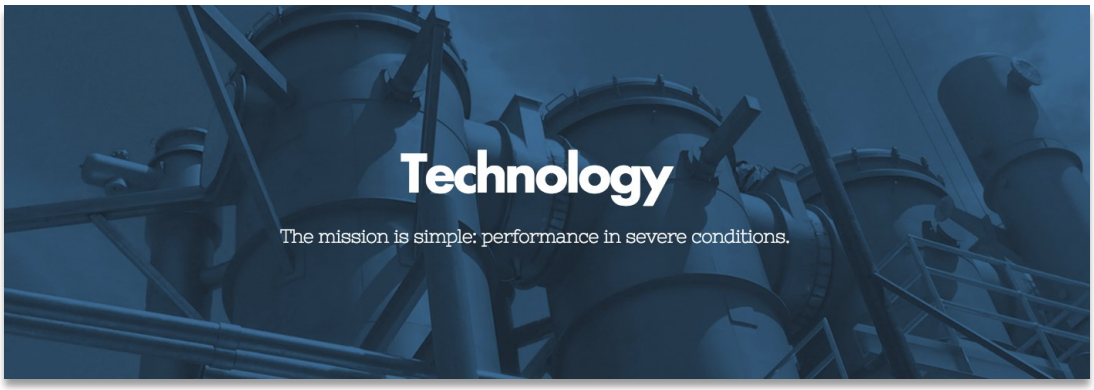
Location: Wylie, TX
Founded: 1996
Principal/CEO: Eric Delangis
Major Customers: N/A
Federal Engagement: N/A
Preferred Point of Contact: Linda Delangis / ldelangis@neukenergy.com

www.competitiveaccesssystems.com

COMPREX, LLC

FinRex® and ShimRex® Technologies

CompRex, LLC designs custom compact heat exchangers and compact heat exchange reactors for a wide range of chemical process applications where efficient heat transfer is critical.



Location: De Pere, WI
Founded: 2014
Principal/CEO: Zhijun Jia
Major Customers: N/A
Federal Engagement: DOE, GAIN
Preferred Point of Contact: Zhijun Jia / Zhijun.jia@comprex-llc.com

www.comprex-llc.com

CONCURRENT TECHNOLOGIES CORPORATION

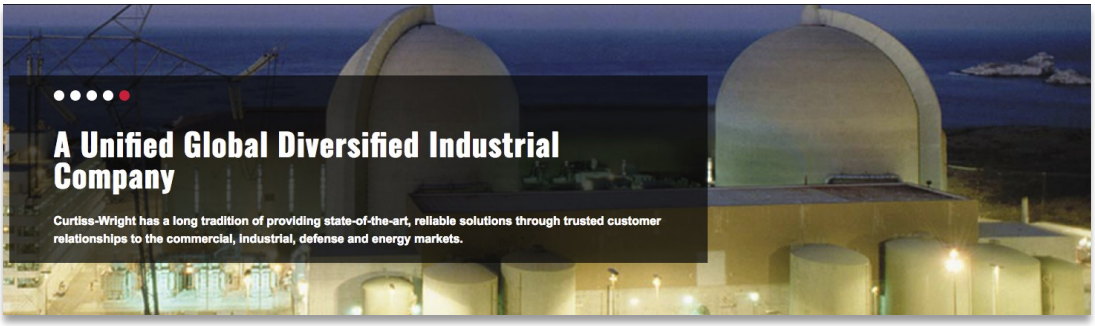
Concurrent Technologies Corporation (CTC) is recognized as one of the world's premier nonprofit applied scientific research and development organizations for the creation and implementation of advanced manufacturing technologies. The skills and processes developed at CTC are leveraged by the Center for Advanced Nuclear Manufacturing (CANM) to benefit both the emerging SMR/AR industry and the legacy reactor fleet.

Location: Johnstown, PA
Founded: 1987
Principal/CEO: Edward J. Sheehan, Jr.
Major Customers: N/A
Federal Engagement: DOE, GAIN
Preferred Point of Contact: Robert Akans / canm@ctc.com

www.ctc.com

CURTISS-WRIGHT

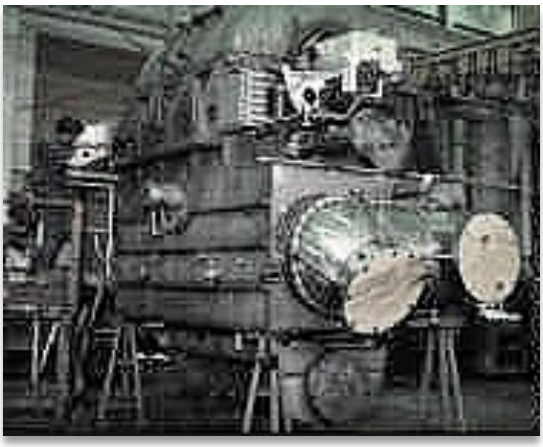
Curtiss-Wright provides advanced products and services in support of the nuclear power industry.

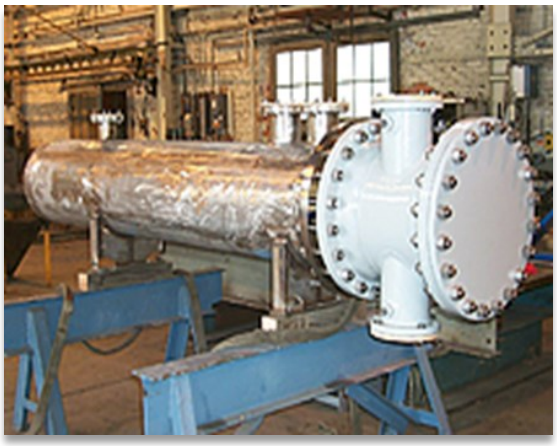


Location: Offices nationwide ***www.curtisswright.com***
Founded: 1929
Principal/CEO: Jim Leachmane (Senior Vice President, General Manager of Nuclear Division)
Major Customers: N/A
Federal Engagement: DOE, NRC
Preferred Point of Contact: Gary Wolski / info@curtisswright.com

DC FABRICATORS, INC.

DC Fabricators manufactures heat exchange equipment for the power generation and defense industries. DCF specializes in small to medium size cylindrical and rectangular condensers and heat exchangers for industrial and cogeneration applications, geothermal power plants, large main station condensers (to over 500,000 sq.ft.), process heat exchangers with pressures over 2,000 psi, and nuclear power systems. DCF's backs up its manufacturing capabilities with complete engineering analysis and design capabilities that conform to ASME Code, TEMA Standards, HEI Standards for Steam Condensers, and International Codes and Standards.





www.dcfab.com

Location: Florence, NJ
Founded: 1993
Principal/CEO: Gary Butler
Major Customers: US Navy, General Dynamics, Bechtel, Huntington Ingalls, Talen Energy, NPPD, Southern Illinois Power, Eastman Chemical
Federal Engagement: DOE, DOD
Preferred Point of Contact: Derrick Phillips / dphillips@dcfab.com / 609-499-3000 ext. 225

DUBOSE NATIONAL ENERGY SERVICES

An ASME certificate holder since 1977, DNES proudly offers quality products with exceptional (24/7) service. DNES carries one of the largest, most diversified inventories of nuclear qualified material. DNES stocks bar, plate, sheet, structural shapes, pipe, tubing, flanges, fittings, fasteners, Unistrut® metal framing products, weld rod and wire. DNES can support common carbon and alloy steel to highly corrosive-resistant stainless; nickel alloys to aluminum and bronze. In addition, DNES offers many value-added services from machining, fabricating, sawing, burning, cleaning, blasting, painting, heat treating, in-house testing (including NDE), and reverse engineering. DNES products and services are offered under a comprehensive Quality Program that is second to none. The DNES Quality Program is based on ASME Section III, NCA/ WA-3800 and 4000 and accreditation through our approved 'N-type' certificates (NA, NPT and NS) ; 10CFR50 Appendix B; ASME NQA-1; ANSI N45.2; CAN 3-Z299; & MIL-I-45208A. Additionally, DNES is also accredited under AISC and AWS, as well as ASME Section VIII (Pressure Vessels, Division 1 – U & R Stamps).

NUCLEAR INDUSTRY ASSESSMENT CORPORATION

NPT NA NS U

CERTIFIED WELDING FABRICATOR

AISC CERTIFIED FABRICATOR

Location: Clinton, NC

www.dubosenes.com

Founded: 1990

Principal/CEO: Richard Rogers (President), Beau Laslo (Director of Sales), Doug Vickery (Director of Quality)

Major Customers: USA: All nuclear utilities, DOE, DOD, National Labs and ~300 OEM's/ Fabricators/EPC's who support USA nuclear programs. Canada: All nuclear utilities, National Labs and ~75 Canadian OEM's/Fabricators/EPC's who support Canada's nuclear programs. Worldwide: Several Utilities and OEM's/Fabricators/EPC's nuclear programs.

Federal Engagement: DOE, DOD

Preferred Point of Contact: Beau Laslo / beau.laslo@dubosenes.com / 910-590-2151 ext. 112

ENERCON

ENERCON
Excellence—Every project. Every day.

ENERCON is an architectural engineering, environmental, technical, and management services firm providing a broad range of professional services to private, public, and government sector clients both in the United States and internationally. Since 2002, ENERCON has been a leader in supporting deployment of new nuclear power plants world-wide.

ENERCON has supported clients in performing new nuclear plant site selection studies, evaluating alternative nuclear technologies, and developing design certification applications, license applications, and environmental reports. Our long list of satisfied clients has been built on our solid reputation as a premier provider of high quality, cost effective services. Our clients know that we continuously strive to be a firm that is known for our integrity, innovation, excellence, and responsiveness.

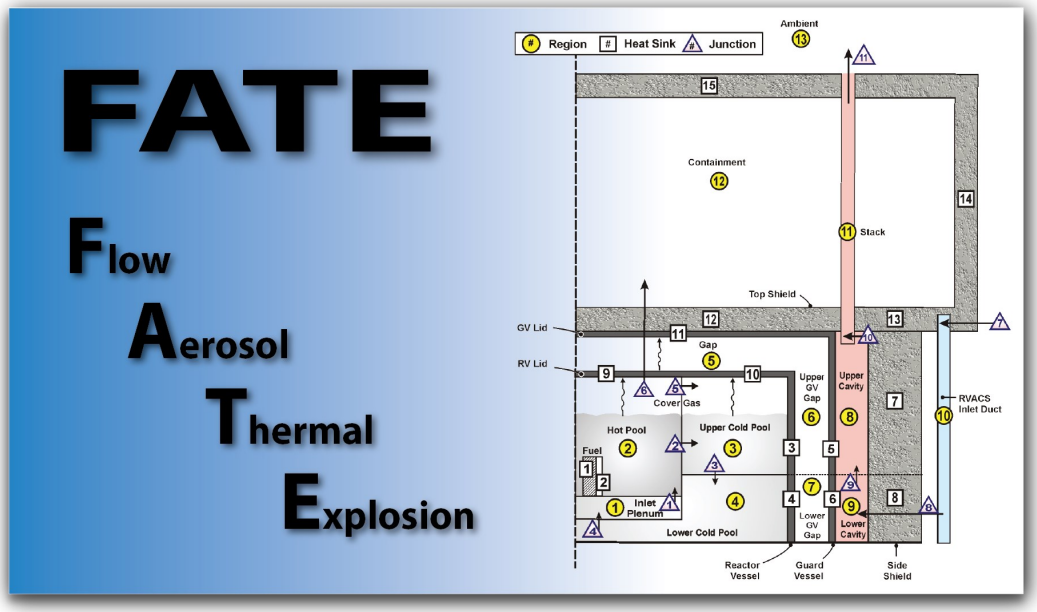
Location: Kennesaw, GA
Founded: 1983
Principal/CEO: John Richardson
Major Customers: N/A
Federal Engagement: N/A
Preferred Point of Contact: John Durham / jdurham@enercon.com / 770-590-2176

www.enercon.com

FAUSKE & ASSOCIATES, LLC

FAUSKE & ASSOCIATES, LLC
WORLD LEADER IN NUCLEAR AND CHEMICAL PROCESS SAFETY

FAI specializes in modeling and analyzing both power and non-power nuclear facilities, including light water and liquid metal cooled reactors (LMRs), spent fuel, legacy waste processing, and storage facilities. FAI developed FATE, a facility and process modeling code originally created to support design and safety analyses of spent fuel, tank waste, vitrification, and special materials at DOE's Hanford site. Recently, under the GAIN initiative, FATE was coupled with a LMR accident analysis code to provide mechanistic source term analysis capability for licensing purposes.



Location: Burr Ridge, IL
Founded: 1980
Principal/CEO: John Fasnacht
Major Customers: Westinghouse, Kairos, Sellafield, Hanford, Korea Atomic Research Institute (KAERI)
Federal Engagement: DOE, GAIN, NRC
Preferred Point of Contact: Jim Burelbach / burelbach@fauske.com

www.fauske.com

FISHER CONTROLS

Fisher Controls offers the most complete line of control valves, actuators, instruments, and accessories for process control. We offer a wide array of standard products to suit most needs in the nuclear industry, and with extensive design experience and testing capabilities, we are also able to develop unique, robust products for specific, challenging applications.

Location: Marshalltown, IA
www.emerson.com
Founded: 1992
Principal/CEO: Kevin G. Meyer (Principal), Michael Train (CEO)
Major Customers: All sanctioned nuclear utilities across the globe
Federal Engagement: NRC
Preferred Point of Contact: Charlie Harris / Charlie.harris@emerson.com / 641-754-3220

FISONIC ENERGY SOLUTIONS - POWER SYSTEMS DIVISION

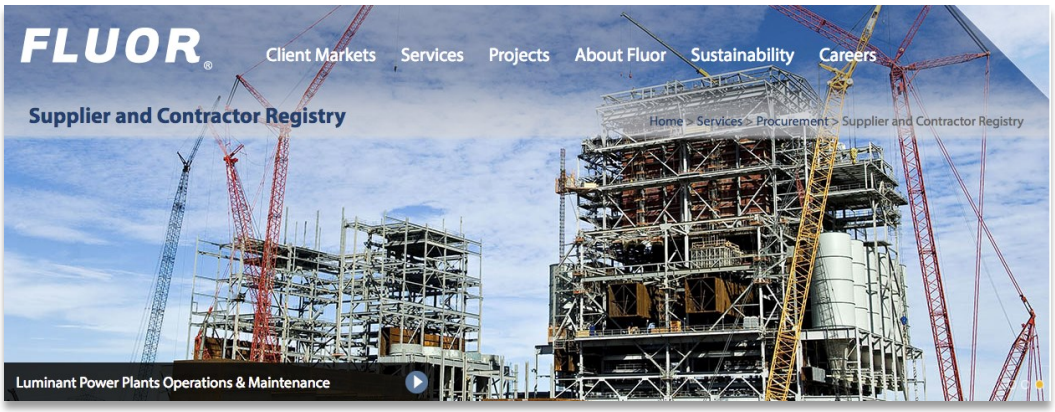
Fisonic Energy Solutions designs pumping systems for power plants that require only heat to operate (no electricity), and use waste heat as a power source where possible.

Location: Waltham, MA
Founded: 2016
Principal/CEO: Ed Pheil (CTO)
Major Customers: N/A
Federal Engagement: Other
Preferred Point of Contact: Ed Pheil / ed.pheil@fisonic.us

www.fisonicsolutions.com

FLUOR

Fluor is one of the world's largest publicly-traded engineering, procurement, fabrication, construction (EPFC) and maintenance companies, offering integrated solutions for clients' projects. For the past 70 years, Fluor has executed some of the most complex and challenging projects in the nuclear industry.



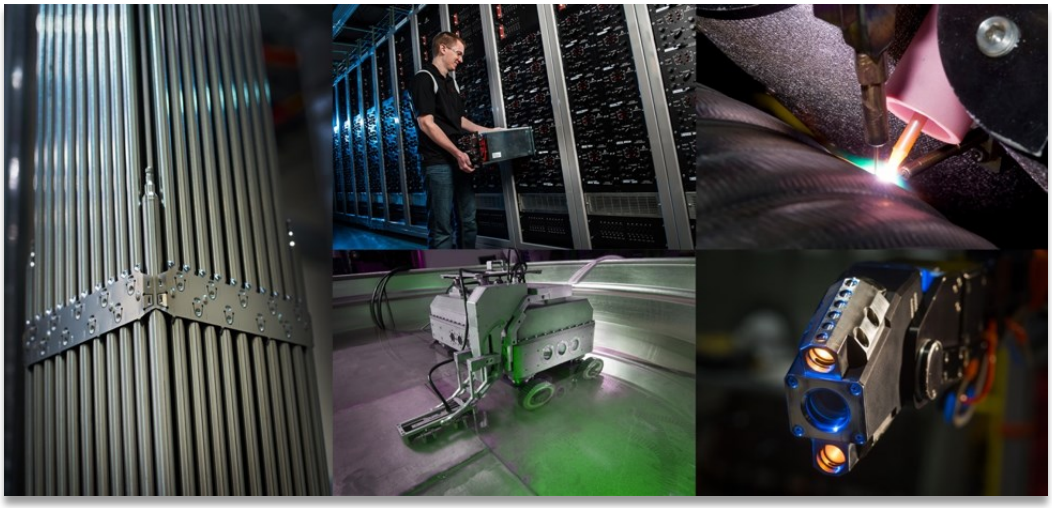
www.fluor.com

Location: Global
Founded: 2012
Principal/CEO: David Seaton
Major Customers: N/A
Federal Engagement: DOE, NRC, Other
Preferred Point of Contact: Brad Porlier / brad.porlier@fluor.com

FRAMATOME

framatome

Framatome is a major international player in the nuclear energy market recognized for its innovative solutions and value-added technologies for designing, building, maintaining, and advancing the global nuclear fleet. The company designs, manufactures, and installs components, fuel and instrumentation and control systems for nuclear power plants and offers a full range of reactor services. Framatome is innovating to design the reactors of tomorrow. Our activities include reactor design, systems engineering, metallic fuel development, and industry counsel to help progress licensing and commercialization of advanced reactors in the United States.



Location: Nationwide

www.framatome.com

Founded: 1989

Principal/CEO: Gary Mignogna

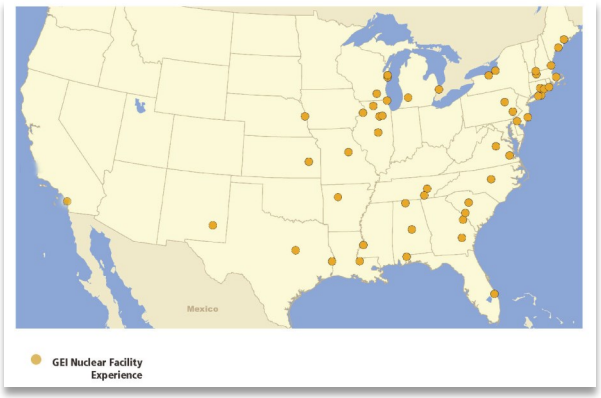
Major Customers: N/A

Federal Engagement: DOE, GAIN, ARPA-E, NRC, Other

Preferred Point of Contact: Darryl Gordon / Darryl.gordon@framatome.com / 434-832-5199

GEI CONSULTANTS, INC.

Our multi-disciplined team of engineers and scientists deliver integrated geotechnical, environmental, water resources, and ecological engineering solutions to diverse clientele nationwide. GEI recognizes the need to provide safe, clean, secure, base load electric power to influence our environment and has made a commitment to provide resources to support this need. GEI provides services with a focus on client success by integrating experienced project managers into our clients' team. Our services for nuclear facilities include: Site Characterization/Selection; Seismic Stability and Liquefaction Analysis; Foundation Investigation; Design for Static and Seismic Loading; Vibration Analysis; Excavation Support; Geohydrologic and Hydrologic; Licensing Support; Embankment Design and Rehabilitation; Preparation of Plans and Specifications; Field Instrumentation Installation and Monitoring; Construction Observation and Consultation; Environmental and Ecological Services; and Decommissioning. GEI has had a Nuclear Quality Assurance Manual since 1972 and we provide all our services under a client-audited Quality Assurance Program (QAP) that meets the requirements of 10 CFR Part 50 Appendix B, ASME NQA-1-1994 and ANSI N45.2- 1977. We have firmly established a reputation amongst the industry for achieving excellent results, inspired problem-solving, and outstanding client satisfaction.



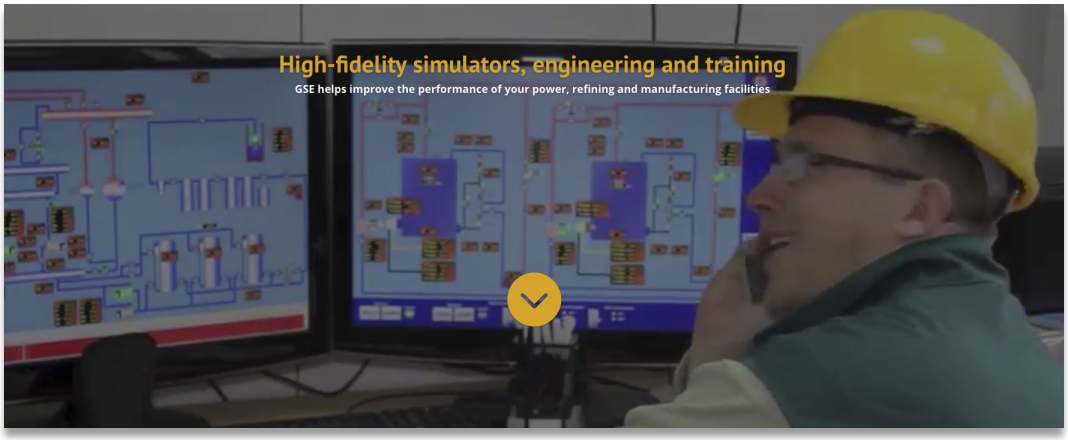
www.geiconsultants.com

Location: Woburn, MA
Founded: 1970
Principal/CEO: Ron Palmieri
Major Customers: Holtec International, TVA, Entergy, Exelon, Bechtel, and Orano
Federal Engagement: DOE, NRC, USACE, EPA, DOJ, TVA
Preferred Point of Contact: Robert N. Lambe / rlambe@geiconsultants.com; Chad R. Conti / cconti@geiconsultants.com

GSE PERFORMANCE SOLUTIONS, INC.

GSE SYSTEMS®
Your performance improvement partner

GSE is the world leader in simulation systems and solutions for the nuclear power industry. GSE's technology allows the end user to conduct engineering and design studies, conduct "what if" analyses and train personnel to exacting standards. GSE's technology is critical for customers to improve load factors, reduce operational risk and lower operating costs.

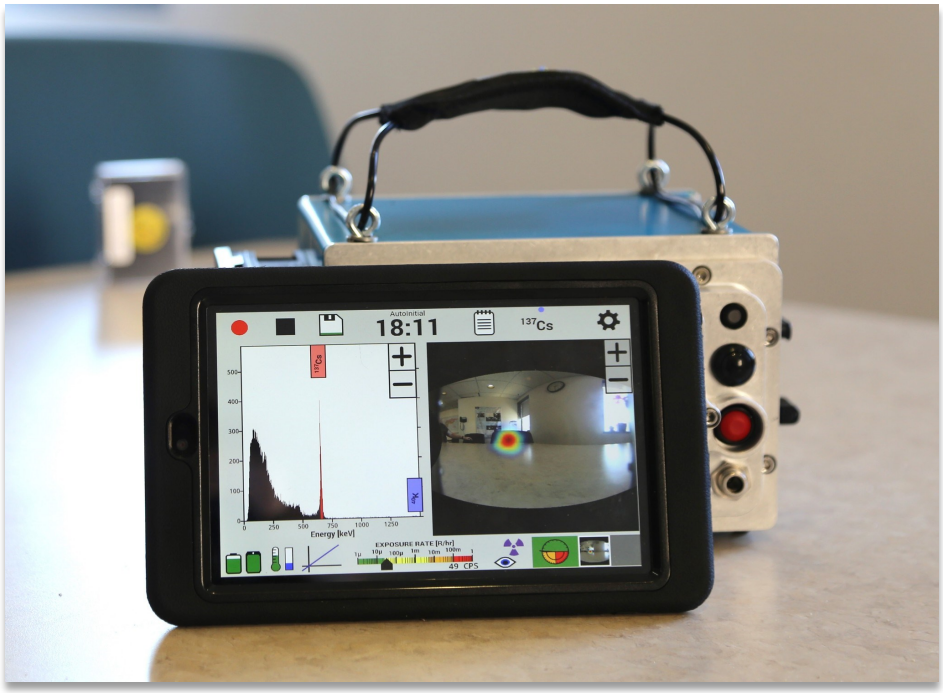


Location: Sykesville, MD
Founded: 1994
Principal/CEO: Kyle Loudermilk
Major Customers: N/A
Federal Engagement: DOE, GAIN, ARPA-E, NRC
Preferred Point of Contact: Jay Umholtz / jay.umholtz@gses.com

www.gses.com

H3D, INC.

H3D offers the world's highest-performance imaging spectrometers. Quickly identifying and localizing gamma-ray sources with a single measurement, H3D is revolutionizing how measurements are performed. H3D detectors are used in over half of U.S. nuclear power plants.

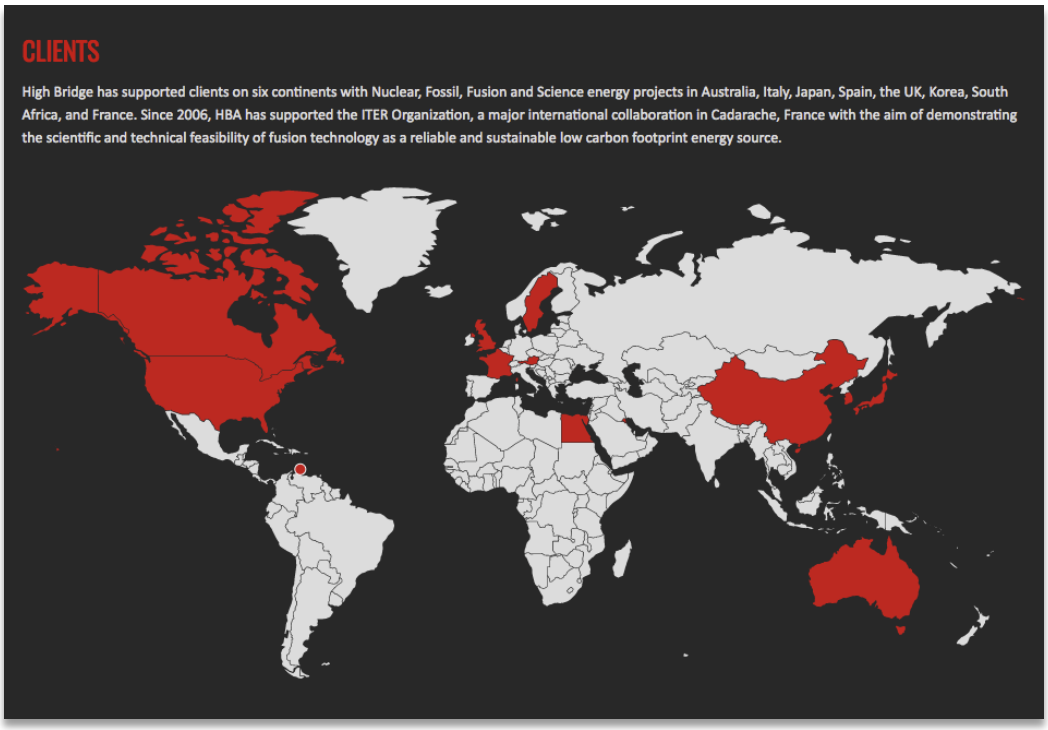


www.h3dgamma.com

Location: Ann Arbor, MI
Founded: N/A
Principal/CEO: Willy Kaye
Major Customers: N/A
Federal Engagement: DOE
Preferred Point of Contact: Andy Boucher / andy@h3dgamma.com / 734-661-6416

HIGHBRIDGE ENERGY DEVELOPMENT

High Bridge Energy Development conceptualizes and executes projects for advanced reactors and SMRs.



www.hba-inc.com

Location: Nationwide
Founded: 2011
Principal/CEO: Steve R. Maehr
Major Customers: N/A
Federal Engagement: DOE, GAIN, ARPA-E, NRC
Preferred Point of Contact: Philip Moor / Philip.moor@hba-inc.com / 770-729-8755

LIGHTBRIDGE CORPORATION

Lightbridge develops next generation fuel technology.

Location: Reston, VA
Founded: 2006
Principal/CEO: Seth Grae
Major Customers: N/A
Federal Engagement: DOE, NRC
Preferred Point of Contact: Seth Grae / 571-730-1200

ltbridge.com

LPI, INC.

LPI, Inc. was established in New York City in 1885 to provide services to a fast evolving industrial nation. We began by doing chemical assays for a variety of industries. In the 1950s, a metallurgical laboratory, metallurgical services, and failure analyses were added. Over time, this expanded to include stress analysis, fracture mechanics, and other services that made us a full-service consulting engineering firm.

LPI, Inc. has continually expanded our staff and capabilities to enable a broad range of expertise. In turn, our clients trust us to solve problems that range from challenging to extraordinary. With over a century of service, LPI, Inc. has a long held, outstanding, and global reputation for engineering excellence and cost effective problem solving.

Whether it involves the analysis of the New York World Trade Center disaster, the breakup of an oil tanker in the North Atlantic, the weakening of a stadium roof structure, or the cracking of a critical component at a nuclear power facility, every industrial sector today faces a growing need to continue operating existing structures and current equipment in a safe, reliable, and cost effective manner. Our business mission is to assess and deliver the most cost effective solutions to our clients' engineering problems. To accomplish this, we've developed a multi-disciplined staff of technical specialists with expertise in many specialized industrial sectors.

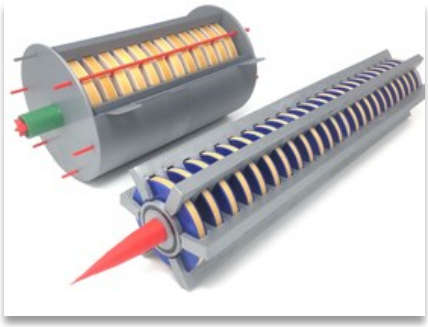
www.lpiny.com

Location: New York, NY
Founded: 1885
Principal/CEO: Robert Vecchio
Major Customers: N/A
Federal Engagement: DOE, ARPA-E, GAIN, NRC
Preferred Point of Contact: Jennifer Labeaf / jlabeaf@lpiny.com / 509-420-7684

MAIDANA RESEARCH

MAIDANA RESEARCH
Engineering Design and Scientific Research

MAIDANA RESEARCH is a small business dedicated to engineering design and scientific research. Its main set of activities rely on computer aided design, engineering and manufacturing (CAD/CAE/CAM), basic and applied research in the engineering and physical sciences, and consulting in topics related to industries and advanced technologies deemed critical to national security and to long term economic development including, but not limited to, aerospace, satellites, nuclear technologies, defense-related industries, and advanced energy systems. We also provide specialized services in the research, design and development of liquid metal and molten salt thermo-magnetic systems for nuclear, space and industrial applications including software development, rapid prototyping, advanced and hybrid manufacturing of components, test loops, instrumentation, and control and digital monitoring systems for active flow control and machine protection.



Location: ID, UT, Switzerland, Thailand
Founded: 2006
Principal/CEO: Carlos O. Maidana
Major Customers: N/A
Federal Engagement: DOE, GAIN, NASA, DoD, Other
Preferred Point of Contact: management@maidana-research.com

www.maidana-research.com

NUTHERM INTERNATIONAL, INC.

Nutherm is a small business concern serving the DOE and commercial nuclear power industry since 1979. We specialize in the design, manufacture, qualification, and commercial-grade dedication of systems and components for electrical power, control, and instrumentation. Nutherm's in-house lab features electrical performance, accelerated thermal aging, HELB, LOCA, and seismic testing along with numerous specialized testing devices. Nutherm maintains a Quality Assurance Program to support its products and services for safety-class and safety-significant applications. The Nutherm audited Quality Assurance Program meets the requirement of ASME NQA-1, 10 CFR 50 Appendix B, 10 CFR Part 21, ANSI/ASME Standard N45.2, and DOE Order 414.1D.

www.nutherm.com

Location: Mt. Vernon, IL
Founded: 1976
Principal/CEO: Wade Bowlin
Major Customers: Los Alamos National Laboratory, Oak Ridge National Laboratory, Savannah River Site, Hanford Site
Federal Engagement: DOE, NRC
Preferred Point of Contact: sales@nutherm.com

NUVISION ENGINEERING, INC.

NuVision Engineering is an engineering and technology services company specializing in nuclear applications. We provide technically advanced engineering solutions and services for governments and businesses worldwide. We also design and deploy rad-hardened robotic manipulators for use in radioactive environments, and advanced process systems to manage radioactive waste. Our customers include the U.S. and international governments, utility companies, and medical research facilities. Our experienced staff and portfolio enable us to provide solutions to complex problems safely, quickly, and cost effectively. NuVision was founded in 1971 and is headquartered in Pittsburgh, Pennsylvania, with major operational facilities near Charlotte, North Carolina.

Location: Pittsburgh, PA

nuvisioneng.com

Founded: 1971

Principal/CEO: Brian Scott Beley

Major Customers: U.S. and international governments, utility companies, and medical research facilities

Federal Engagement: DOE, GAIN, ARPA-E, NRC, Other

Preferred Point of Contact: Erich Keszler / ekeszler@nuvisioneng.com; Greg Lazzaro / glazzaro@nuvisioneng.com

POWER SYSTEM SENTINEL TECHNOLOGIES, LLC

PSStech
Guarding the Grid

Born out of a need to protect the nuclear industry, PSStech was founded to provide nuclear generating stations with open phase protection. PSStech provides design, manufacturing, and engineering services to the electric power industry and large industrial and commercial customers.

Location: Warrior, AL
www.psstech.com
Founded: 2014
Principal/CEO: Greg Franklin
Major Customers: U.S. Nuclear Power Plants, Electric Power Utilities, Large Industrial & Commercial Facilities
Federal Engagement: DOE, GAIN, NRC
Preferred Point of Contact: Chris Melhorn / cmelhorn@psstech.com / 865-456-0602

PRECISION CUSTOM COMPONENTS, LLC

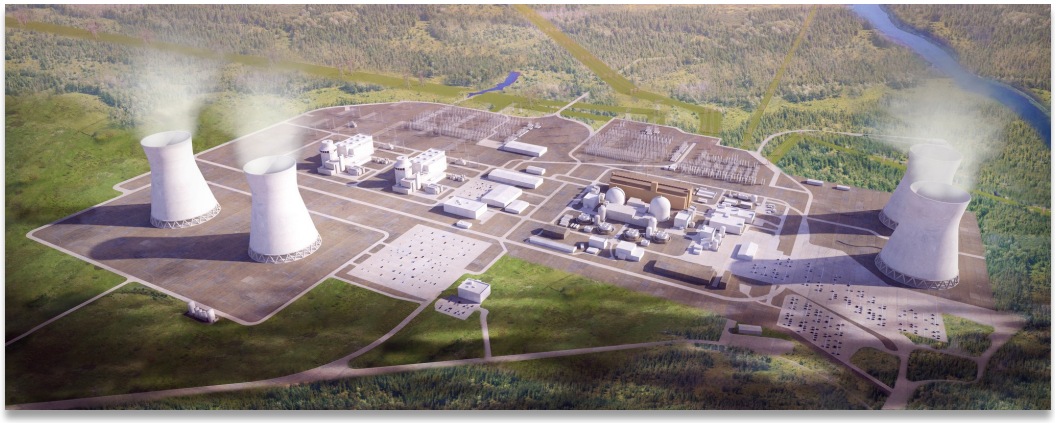
PCC has been manufacturing large hydro, fossil, and nuclear power generation equipment in our York, PA location for over 140 years. We have fabricated NSSS vessels and other equipment for the nuclear and process industries including Westinghouse, GE, Framatome, ExxonMobil, Dow DuPont, U.S. Navy, DOE, National Labs, electric utilities, and others. Our nuclear manufacturing history dates back to the industry's origins with Shippingport-1 and continues to this day with SMR, Gen III+ and Gen IV reactor hardware and design support.

www.pcc-york.com

Location: York, PA
Founded: 1876
Principal/CEO: Gary Butler
Major Customers: Westinghouse, Framatome, NuScale, BWXT, US Navy, Bechtel, General Dynamics, Northrop Grumman, Dow DuPont, ExxonMobil, US DOE, and National Laboratories
Federal Engagement: DOE, NRC, DOD, NASA
Preferred Point of Contact: Jim Stouch / jstouch@pcc-york.com / 717-434-1802

SOUTHERN NUCLEAR DEVELOPMENT, LLC

Southern Nuclear Development, a subsidiary of Southern Nuclear Operating Company, pursues partnerships across the industry to drive the success of advanced nuclear technologies to be deployed as we move toward low- to no- carbon operations by 2050 — benefiting Southern Company customers for years to come. Southern Nuclear Development leverages decades of experience and research in nuclear operations, engineering, licensing and development to help advanced nuclear developers execute each phase of their strategy, from concept to commercial operation.



Location: Birmingham, AL
Founded: N/A
Principal/CEO: Stephen E. Kuczynski
Major Customers: N/A
Federal Engagement: DOE, NRC, EPA, FEMA
Preferred Point of Contact: Ben Carmichael / bmcarmic@southernco.com / 205-992-5944

www.southernnuclear.com

STUDSVIK SCANDPOWER

Studsvik

Studsvik Scandpower provides nuclear simulation software and services which manage fuel from arrival on site to departure in casks. Key software products include CASMO/SIMULATE, GARDEL, S3K, S3R, MARLA, SNF, and CASKLOAD.

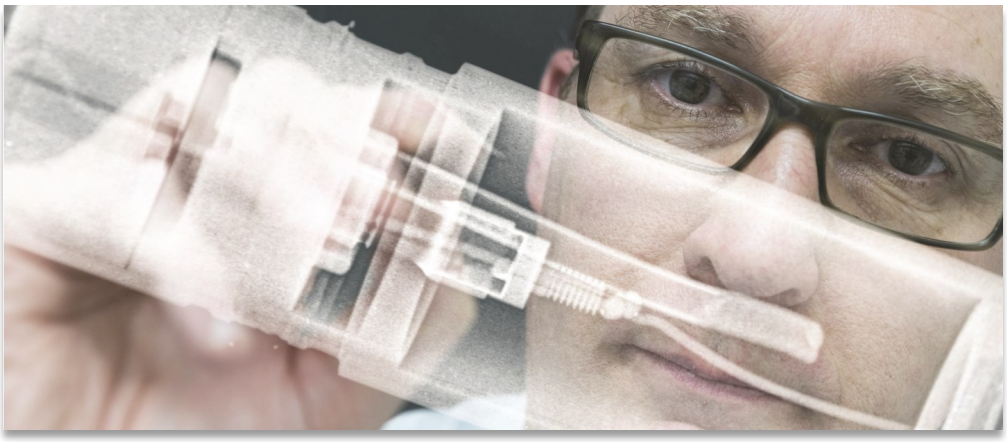
Location: Global
Founded: N/A
Principal/CEO: Steve Freel
Major Customers: N/A
Federal Engagement: DOE, GAIN, ARPA-E, NRC, Other
Preferred Point of Contact: Art Wharton / art.wharton@studsvik.com

www.studsvik.com

ULTRA ELECTRONICS LIMITED

Ultra Electronics is a world-leading group of businesses operating in the Defense & Aerospace, Security & Cyber, Transport, and Energy markets. With over 60 years' experience, its Energy business offers a defense-in-depth approach to the nuclear industry focusing on systems requiring formal safety justification or qualification.

It has a core capability of high temperature neutron flux sensors and associated protection electronics from its long history supplying the UK's advanced gas cooled reactors. In North America it also provides nuclear qualified process sensors with over 80% of all reactors relying exclusively on its temperature devices for critical coolant monitoring.



Location: Worldwide
www.ultra-electronics.com
Founded: 1993
Principal/CEO: Nick Gaines (President, Ultra Electronics Energy)
Major Customers: N/A
Federal Engagement: DOE, NRC
Preferred Point of Contact: Adam Gaither / adam.gaither@ultra-nspi.com

NATIONAL LABORATORIES

ARGONNE NATIONAL LABORATORY

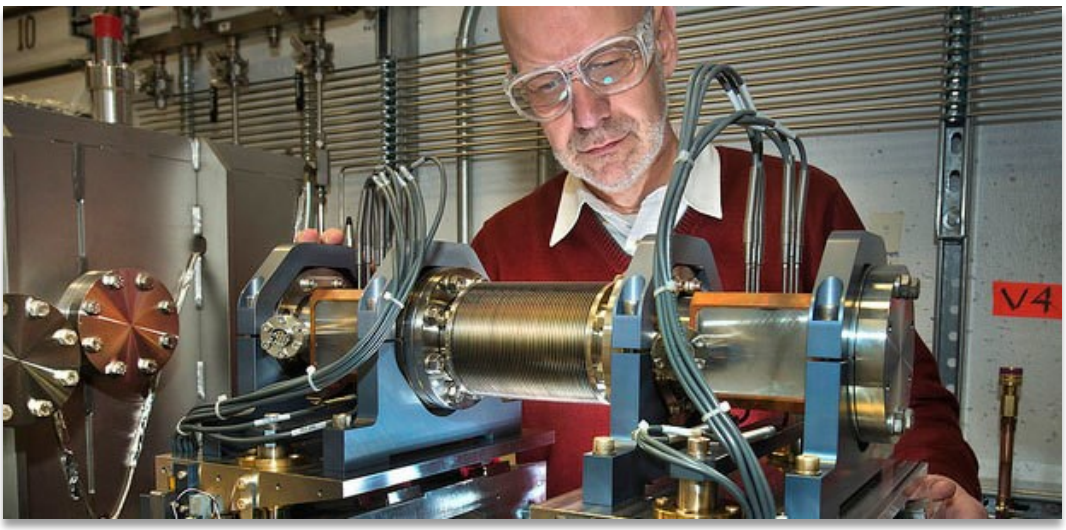
Argonne National Laboratory is a multidisciplinary science and engineering research center, where scientists and engineers work together to answer the biggest questions facing humanity, from how to obtain affordable clean energy to protecting ourselves and our environment. Argonne was born out of the University of Chicago's work on the Manhattan Project in the 1940s. Ever since that time, the Laboratory's goal has been to make an impact- from the atomic to the human to the global scale. Argonne pioneered the application of nuclear fission for energy generation and maintains leading-edge experimental and computational capabilities for developing innovative reactor and fuel cycle systems.

Location: Lemont, IL
Founded: 1946
Principal/CEO: Paul K. Kearns (Director)
Federal Engagement: DOE-SC, DOE-NE, NNSA, DOE-EERE, NRC, ARPA-E, DOD, DHS
Preferred Point of Contact: Hussein S. Khalil / hkhalil@anl.gov / 630-252-7266

www.anl.gov

BROOKHAVEN NATIONAL LABORATORY

Brookhaven National Laboratory conducts research and development related to nuclear technologies (reactors and accelerator-driven systems), advanced materials for nuclear applications, proliferation resistance and physical protection, reliability and risk assessment, and advanced modeling techniques for reactor simulation and energy systems.



Location: Upton, NY
Founded: 1947
Principal/CEO: Doon Glbbs
Federal Engagement: DOE, GAIN, ARPA-E, NRC, Other
Preferred Point of Contact: William C. Horak / horak@bnl.gov / 631-344-2627

www.bnl.gov

IDAHO NATIONAL LABORATORY

Idaho National Laboratory (INL) is the nation's lead laboratory for nuclear energy research, development, demonstration and deployment. INL's nuclear energy researchers work with unparalleled irradiation and post-irradiation examination, fuel fabrication and materials testing facilities to develop new fuels to extend the life of the current fleet and fuels and materials for advanced nuclear reactor designs. INL leads many key initiatives for DOE's Office of Nuclear Energy, including GAIN, the Light Water Reactor Sustainability (LWRS) program and NSUF.

NSUF is DOE-NE's first and only user facility. Through a distributed partnership, NSUF integrates national laboratory, university and industry research to benefit the nation.

www.inl.gov

Location: Idaho Falls, ID
Founded: 1949
Principal/CEO: Mark Peters
NSUF Director: Rory Kennedy
Federal Engagement: DOE, GAIN, ARPA-E, NSUF, NEUP, NRC
Preferred Point of Contact: (INL) Jess Gehin / jess.gehin@inl.gov / 208-526-3486; (NSUF) Tiffany Adams / tiffany.adams@inl.gov / 208-526-4081

LAWRENCE BERKELEY NATIONAL LABORATORY

Lawrence Berkeley National Laboratory specialized in science and technology development for energy applications.

Location: Berkeley, CA
Founded: 1931
Principal/CEO: Michael Witherell
Federal Engagement: DOE, GAIN, ARPA-E, NRC, Other
Preferred Point of Contact: Peter Hosemann / peterh@berkeley.edu / 510-717-5752

www.lbl.gov

LAWRENCE LIVERMORE NATIONAL LABORATORY

ADVANCED NUCLEAR | NATIONAL LABORATORY

Lawrence Livermore National Laboratory

For more than 60 years, the Lawrence Livermore National Laboratory (LLNL) has applied science and technology to make the world a safer place.

Livermore's defining responsibility is ensuring the safety, security and reliability of the nation's nuclear deterrent. Yet LLNL's mission is broader than stockpile stewardship, as dangers ranging from nuclear proliferation and terrorism to energy shortages and climate change threaten national security and global stability. The Laboratory's science and engineering are being applied to achieve breakthroughs for counterterrorism and nonproliferation, defense and intelligence, energy and environmental security.

Location: Livermore, CA
Founded: 1952
Principal/CEO: Bill Goldstein
Federal Engagement: DOE, NRC, ARPA-E, GAIN, NNSA, DHS, Other
Preferred Point of Contact: Kiel Holliday / holliday7@llnl.gov / 925-422-4074

www.llnl.gov

LOS ALAMOS NATIONAL LABORATORY

Los Alamos National Laboratory's mission is to solve national security challenges through scientific excellence. The Laboratory conducts fundamental nuclear materials research for future nuclear reactor designs and fuel cycle options, develops detection technologies needed for global nuclear materials management and supports nuclear energy initiatives through advanced modeling and simulation.

This work includes:

- *Fundamental advances in nuclear fuels and cladding materials*
- *Nonproliferation safeguards*
- *Reactor concepts*

www.lanl.gov

Location: Los Alamos, NM
Founded: 1943
Principal/CEO: Terry Wallace
Federal Engagement: DOE, GAIN, NRC, ARPA-E
Preferred Point of Contact: DV Rao / dvrao@lanl.gov / 505-667-5098

OAK RIDGE NATIONAL LABORATORY

Oak Ridge National Laboratory (ORNL) is the U.S. Department of Energy's largest science and energy laboratory with signature strengths in computing, materials, neutron science, and nuclear science and technology. ORNL provides science and technology capabilities and services to extend the life of our existing light water reactor fleet, create and develop concepts for advanced reactor technologies, develop advanced nuclear fuels and fuel cycles, and support modernization of the U.S. nuclear regulatory infrastructure.

www.ornl.gov

Location: Oak Ridge, TN
Founded: 1943
Principal/CEO: Thomas Zacharia
Federal Engagement: DOE, GAIN, ARPA-E, NRC, Other
Preferred Point of Contact: Kenneth Tobin / tobinkwjr@ornl.gov / 865-574-5267; Andrew Worrall / worralla@ornl.gov / 865-576-9369

PACIFIC NORTHWEST NATIONAL LABORATORY

Pacific Northwest National Laboratory (PNNL) conducts reseach and development across the nuclear fuel cycle to support DOE and industry in development of advanced materials, advanced fuels and Gen IV reactors for the next generation of nuclear energy. Drawing on decades of expertise in nuclear science, engineering and regulation, along with its Category 2 Nuclear Facility assets, PNNL supports technology development across the TRL spectrum.

Location: Richland, WA
Founded: 1965
Principal/CEO: Steven Ashby
Federal Engagement: DOE, GAIN, NRC, ARPA-E, NNSA, DHS
Preferred Point of Contact: Mark Nutt / mark.nutt@pnnl.gov / 509-375-2984

nuclearenergy.pnnl.gov

SANDIA NATIONAL LABORATORIES

Sandia National Laboratories

A Federally Funded Research and Development Center for the National Nuclear Security administration with a strong science, technology and engineering foundation enables Sandia's mission to develop advanced technologies to ensure global peace through a capable research staff working at the forefront of innovation, collaborative research with universities and companies and discretionary research projects with significant potential impact. Sandia National Laboratories' unique mission responsibilities in the nuclear weapons program create a foundation from which they leverage capabilities, enabling them to solve complex national security problems.

Location: Albuquerque, NM
Founded: 1949
Principal/CEO: Steven Younger
Federal Engagement: DOE, GAIN, ARPA-E, NRC, Other
Preferred Point of Contact: Richard Griffith / rogrif@sandia.gov / 505-844-8232; Patrick Mattie / pdmatti@sandia.gov / 505-284-4796

www.sandia.gov

SAVANNAH RIVER NATIONAL LABORATORY

SRNL™
SAVANNAH RIVER NATIONAL LABORATORY
OPERATED BY SAVANNAH RIVER NUCLEAR SOLUTIONS

Savannah River National Laboratory (SRNL) has core competencies in nuclear materials management and advanced materials design, manufacture, characterization and testing. SRNL has many unique laboratory facilities enabling the safe study and handling of nuclear materials and nuclear fuel as well as ultra-sensitive measurement and analysis of radioactive materials.

Location: Aiken, SC
Founded: 1951
Principal/CEO: Vahid Majidi
Federal Engagement: DOE, GAIN, ARPA-E, NRC
Preferred Point of Contact: Thad Adams / thad.adams@srnl.doe.gov / 803-725-5510

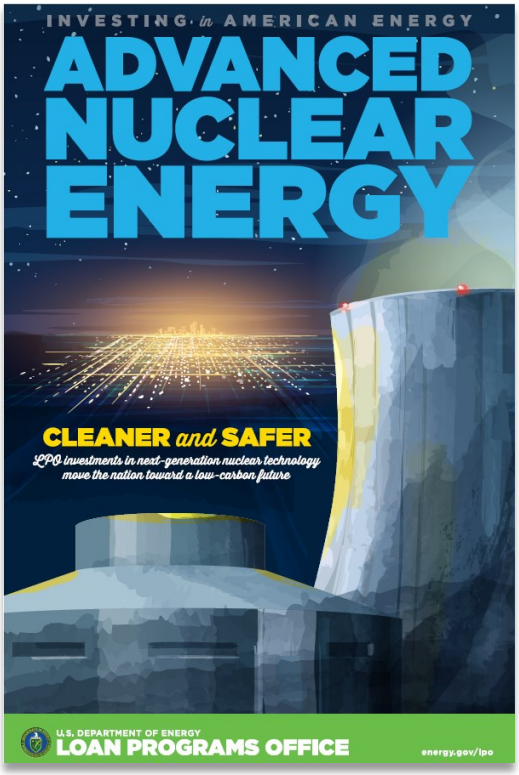
srnl.doe.gov

RESOURCES

U.S. DEPARTMENT OF ENERGY LOAN PROGRAMS OFFICE

The Department of Energy's Loan Programs Office (LPO) finances large-scale, all-of-the-above energy infrastructure projects in the Unites States. LPO's in-house team has decades of financial technical, legal, and environmental experience and works closely with industry to bridge gaps in the commercial debt market when innovative technologies or unfamiliar borrowers may not be well understood by the private sector.

With more than $40 billion of loans and loan guarantees available, LPO can provide access to debt not typically available in the commercial sector. To date, LPO has approved more than $30 billion of loans and loan guarantees for more than 30 projects and has $12.5 billion of available loan guarantees under its Advanced Nuclear Energy Projects Solicitation. LPO has a proven track record that includes transforming existing energy infrastructure, reviving nuclear construction, accelerating growth of utility-scale solar and wind, expanding domestic manufacturing of electric vehicles, and improving the lives of all Americans by catalyzing new energy technology and creating jobs.



Location: Washington, DC

www.energy.gov/lpo

Preferred Point of Contact: 202-586-8336 / lgprogram@hq.doe.gov

Fourth Edition - January 2019 *(Rev 1.30.19)*

Prepared by :

GAIN Gateway for Accelerated Innovation in Nuclear

Editor: Teresa Krynicki
Graphics: Phyllis King

Contact Us

GAIN
PO Box 1625
MS 3855
Idaho Falls, ID 83415
(208) 526-7763

Email: GAIN@inl.gov

Visit us on the web at
gain.inl.gov

@GAINnuclear

@GAINnuclear

@GAINnuclear